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ABSTRACT

Ninety subjects completed identical simulated maintenance tasks under two experimental conditions. In the high job structural attribute condition subjects were told that the task was high in learning new skills, responsibility, feedback, and task identity; while in the low job structural condition they were told the opposite. Results indicated the strong effect of expectancy upon task performance. Post-experimental job descriptions demonstrated that a highly significant manipulation of task dimensions was achieved. General mental ability was positively related to quantity of performance in high and low conditions. Adherence to the Protestant Work Ethic was related to quantity of performance only in the high condition, while cognitive style was related to quality of performance in both. Task satisfaction was higher for those whose preferences for job structural attributes matched their descriptions of those attributes on the maintenance task. Techniques were investigated to assign individuals to tasks to maximize criteria outcomes. Subjects were rank ordered based on individual difference variables previously found to be most predictive of quantity and quality of performance and task satisfaction. Correlations among them produced positive, negative and insignificant relationships, indicating the difficulties in simultaneously attempting to maximize several outcome variables. (Author/HV)

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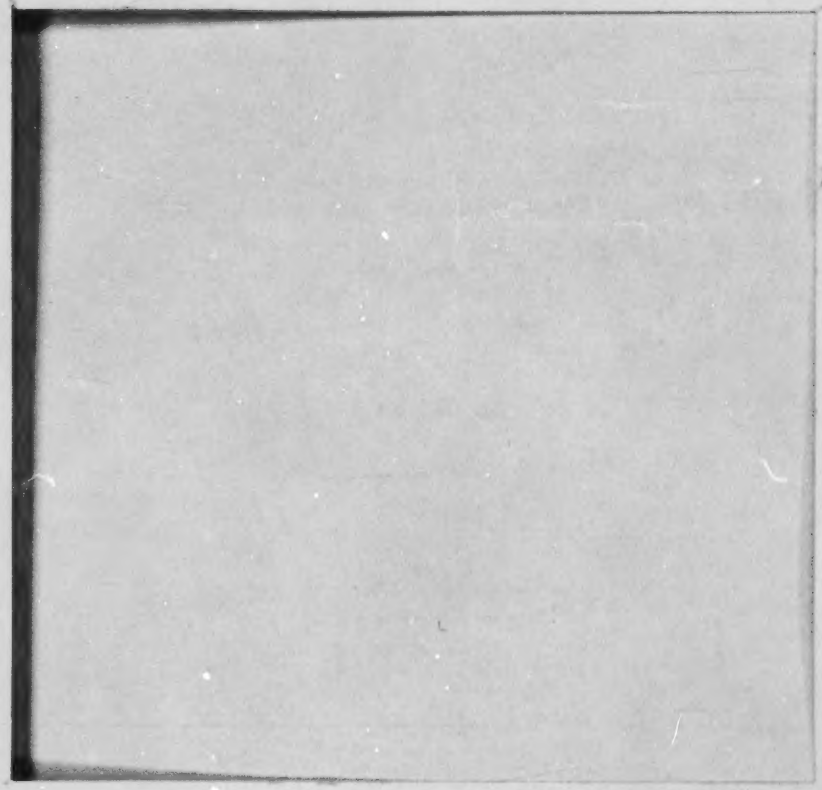

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Technical Report 10

Organizational Policy Decisions as a Function of Individual Differences and Task Design: Maintenance Tasks

Edward J. O'Connor, Gerald V. Barrett,
and Ralph A. Alexander
University of Akron

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Study of simulated maintenance tasks completed under two psychologically manipulated experimental conditions. In the high job structural attribute condition, subjects were told that the task was high in learning new skills, responsibility, feedback, and task identity; and in the low job structural attribute condition, they were told the task was low on these dimensions. All subjects completed physically identical

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experimental tasks. The results indicated the strong effect of expectancy upon task performance. Post-experimental job descriptions indicated that a highly significant manipulation of task dimensions was achieved. No significant difference in quantity or quality of performance or level of satisfaction was found across experimental conditions. General mental ability was positively related to quantity of performance in both high and low conditions. Adherence to the Protestant Work Ethic was related to quantity of performance only in the high condition, while cognitive style was related to quality of performance in both conditions. Satisfaction with the task was significantly higher for those subjects whose preferences for job structural attributes matched their descriptions of those attributes on the maintenance task. Techniques were investigated to assign individuals to tasks to maximize criteria outcomes. Subjects were rank-ordered based on their scores on those individual difference variables which had been found to be most predictive of quantity and quality of performance and task satisfaction. Correlations among these rankings produced positive, negative, and nonsignificant relationships, indicating the possible conflicts that may occur when an organization simultaneously attempts to maximize several outcome variables. The use of multiple criteria measures rather than a single composite criterion approach allowed one to best discern the relationships of general abilities, specific abilities, and personality characteristics with task performance and satisfaction.

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Introduction

During recent years, comprehensive job design programs have focused on examining outcomes resulting from the interactions of task characteristics with both sociological group membership (Turner & Lawrence, 1965), and individual differences (Hackman & Lawler, 1971; Wanous, 1974). While certain investigations may have recognized the interaction of subject and situational variables (Scott, 1967a), the limited models frequently employed have typically failed to incorporate and examine the full range of diverse individual differences which may potentially interact with task characteristics in producing organizational and individual outcomes. Both Rose, Fingerman, Wheaton, Eisner, and Draner (1974) and Fingerman, Eisner, Rose, Wheaton, and Cohen (1975) have recently presented evidence indicating that a diverse range of individual differences appear to interact with varying task characteristics in affecting performance. Barrett, Bass, O'Connor, Alexander, Forbes, and Cascio (1975), Barrett, Forbes, Alexander, O'Connor, and Balascoe (1975), and Barrett, O'Connor, Alexander, Forbes, and Balascoe (1975) have found that individual differences in general and specific abilities, as well as personality characteristics, values, preferences, and motivation interact with manipulated and perceived task characteristics in affecting both productivity and satisfaction. Based on these studies, it seems reasonable to conclude that a wide range of individual characteristics should be considered by both researchers and practitioners involved in job design investigations.

Until these recent studies, controlled experimental work had been noticeably lacking in the job design field (Barrett, Dambrot,

& Smith, 1975). The present study was designed to re-examine and extend current findings by investigating the complex interrelationships between a wide range of individual differences and task characteristics and the consequences of these various combinations for quantity, quality, and individual satisfaction.

Numerous individual differences were measured during the current study and effects were examined within the context of the two psychologically manipulated job design levels. The job structural attributes employed were selected for manipulation based on an earlier literature review and both field and laboratory study information indicating their perceived and empirically demonstrated importance for maintenance tasks (Barrett, Bass, O'Connor, Alexander, Forbes, & Cascio, 1975; Barrett, O'Connor, Alexander, Forbes, & Balascoe, 1975). The current research has focused on determining the contrasting single and multiple combinations of individual differences associated with performance and satisfaction on tasks which were both low and high in the psychologically manipulated job structural attributes. It was expected that different individual attributes would be predictive of performance and satisfaction on the two tasks (Barrett, Forbes, Alexander, O'Connor, & Balascoe, 1975; Barrett, O'Connor, Alexander, Forbes, & Balascoe, 1975; Fingerman, Eisner, Rose, Wheaton, & Cohen, 1975; Rose, Fingerman, Wheaton, Eisner, & Kramer, 1974).

Methods

Subjects

Research participants were 90 male undergraduates from the University of Akron who volunteered to participate in a psychology experiment for $2.00 per hour. These individuals, after responding to an advertisement in the school newspaper, were randomly assigned

into two groups, each of which underwent one experimental treatment.

Experimental Criterion Task

The experimental task employed in this research was similar to that previously utilized by Barrett, O'Connor, Alexander, Forbes, and Balascoe (1975). Extensive descriptions of this criterion task are presented within the 1975 technical document by these authors and also within an unpublished doctoral dissertation (O'Connor, 1975).

Experimental Design

The experimental design employed in this study has previously been described by O'Connor (1975). The design included two levels of psychologically manipulated job structural attributes. In the low job structural attribute condition, participants were given a task described as low in responsibility, feedback, task identity, and learning new skills; while in the high job structural attribute treatment, individuals were told that substantial amounts of these attributes were present. These manipulations were presented as part of the written task instructions reinforced by message cards inserted in the simulated equipment and further emphasized by both tape-recorded training instructions and written directions given at the middle of the experimental task.

Task identity was manipulated by informing the low job structural attribute participants that they could complete only a small repetitive portion of the overall task. In contrast, high condition participants were told that they could do a whole piece of work from beginning to end and therefore complete all needed maintenance work on each piece of equipment.

Manipulation of the remaining three job structural attributes emphasized this notion of doing either part of a job or a total task. Feedback was manipulated by informing high job structural attribute participants that the jobs they worked on could be tested immediately after maintenance work was completed. These individuals were told, therefore, that they would be given information regarding the amount and quality of their performance. In contrast, low job structural attribute participants were led to believe that the extensive time required to test suggested repairs in all equipment decks would make it impossible to provide them with feedback on their performance.

Responsibility was manipulated by informing high condition participants that they were fully accountable for whether malfunctions were corrected since they had both the expertise and test equipment needed to locate any potential problem areas. Alternatively, low job structural attribute participants were told that their work was specialized. They were therefore led to believe that they could correct malfunctions in only limited subsections of the total equipment decks, making them only partially accountable for whether malfunctions were fully repaired.

The high level of learning new skills was induced by informing high job structural attribute participants that the job provided a unique opportunity to learn a valuable systematic approach to problem solving which could be generalized to other areas of their personal lives. In contrast, low condition participants were informed that the task they were about to perform was repetitive in nature, making it improbable that they would learn anything that would be useful to them in their personal lives.

Procedure

Participants reported on three separate days for three phases of the experiment. On the first day, each individual was given a test battery designed to measure general and specific abilities as well as individual differences in personality variables, work orientation, motivation, and preferences for job structural attributes. Specifically, the test battery consisted of the Wesman Personnel Classification Test (Wesman, 1965), the Group Embedded Figures Test (Witkin, Oltman, Raskin, & Karp, 1971), the Picture Number Test (Flaugher, 1971a, 1971b), the Maudsley Personality Inventory (Knapp, 1962), the Hand Skills Test (Kipnis, 1962), the Protestant Ethic Scale (Blood, 1969), the Job Attitude Scale (Saleh, 1964, 1971), the Orientation Inventory (Bass, 1967), the Survey of Work Values (Wollack, Goodale, Wijting, & Smith, 1971), and the Work Itself/Work Environment Preference Questionnaire (Cascio, 1973).

On the second day, the participants were given the Rod and Frame Test (Witkin, Lewis, Hertzman, Machover, Meissner, & Wapner, 1954), the Selective Attention Test (Mihal & Barrett, 1976; Kahneman, Ben-Ishai, & Lotan, 1973; Gopher & Kahneman, 1971), and the Attribute Preference Scale (Barrett, Bass, O'Connor, Alexander, Forbes, & Cascio, 1975). After completing these measures, the remainder of the second experimental day was devoted to approximately two hours of training on the maintenance task. Initial instructions were presented in a 17-page Task Procedure Booklet. After being given twenty minutes to read these instructions, each participant worked his way through two typical example jobs under the guidance of the experimenter. A re-emphasis of the manipulations employed and critical information required to complete the

tasks was provided during this training period through the use of tape-recorded instructions. When necessary, special instructions or demonstrations were provided in order to achieve the minimum level of competence needed to perform the tasks.

Experimental data collection took place on the third day. Participants were seated at the same booths they occupied during training and were given five minutes to review the task instructions. During the three-hour experimental session, the participants were allowed to work at their own chosen pace while searching for malfunctions in the simulated electronics equipment. Between one and three jobs to be completed were kept available to these individuals at all times. Errors detected were recorded by the participants on specially prepared Problems Detected Sheets. The rate at which individuals worked was recorded throughout the three-hour session on a Lafayette Pen Recorder (Model 76103). The participants provided this information by pressing designated buttons on a response console when they began jobs, finished jobs, or took breaks.

Following completion of the maintenance task, the following measures of job perceptions and satisfaction were taken: the Job Descriptive Index (Smith, Kendall, & Hulin, 1969), the Attribute Description Scale (Barrett, Bass, O'Connor, Alexander, Forbes, & Cascio, 1975), the Work Itself/Work Environment Description Questionnaire (Cascio, 1973), the Task Description Scale (Scott, 1967), and a measure of intrinsic motivation from the Job Diagnostic Survey (Hackman & Oldham, 1974).

At the end of the data collection session, all participants were paid and provided with debriefing information. Those

in the low condition were given no feedback regarding their personal performance. Based upon the work they had produced, high condition participants were told that their performance was either average, above average, or well above average for both quantity and quality separately. This was done in private after all post-experimental measures had been taken.

Results

Table 1 shows the comparison of task outcome measures for the high job structural attribute condition and low job structural attribute treatment. While no significant differences are evident in the measures of quantity and quality, the high condition participants perceived their experimental task to be significantly more satisfying, attractive, and complex. This sample also reported that the high treatment job possessed greater intrinsic job worth, required greater personal competence, and created a more positive general affective tone and higher level of general arousal.

Manipulation checks are shown in Tables 2 and 3. Table 2 indicates that participants, employing the Work Itself/Work Environment Description Questionnaire (WI/WED), reported the high condition task as having significantly greater amounts of learning new skills, task identity, responsibility, and the sum of the four manipulated job structural attributes. While differences in external feedback descriptions merely tended to approach significance on the Work Itself/Work Environment Description Questionnaire, differences in the described levels of this attribute are highly significant in Table 3 when Attribute Description Scale data is examined. The latter table presents data

Table 1

Overall Criteria for the Low Job Structural Attributes (LJSA) and High Job Structural Attributes (HJSA) Conditions[a]

Criteria	M	SD	t
No. of jobs completed (total)			
HJSA	56.44	13.36	.40
LJSA	57.60	13.95	
Average time per job[b]			
HJSA	727.28	177.09	-.55
LJSA	706.77	178.81	
Average time between jobs[b]			
HJSA	15.88	9.22	-.04
LJSA	15.79	9.91	
Work satisfaction			
HJSA	15.13	8.08	-1.82*
LJSA	11.89	8.84	
Errors correctly detected[c]			
HJSA	4.09	.70	-.15
LJSA	4.06	.75	
Intrinsic job worth			
HJSA	3.42	1.35	-2.41**
LJSA	2.79	1.11	
Task attractiveness			
HJSA	3.03	1.07	-2.54**
LJSA	2.52	.84	
General affective tone			
HJSA	3.29	.95	-2.35**
LJSA	2.85	.82	
General arousal			
HJSA	3.42	1.09	-3.06**
LJSA	2.71	1.12	
Personal competence			
HJSA	4.99	1.02	-1.87*
LJSA	4.55	1.19	

Table 1 (Cont'd.)

Criteria	M	SD	t
Job complexity			
HJSA	2.64	.99	-2.18*
LJSA	2.24	.74	

[a] n = 45 for each group.

[b] Time in seconds.

[c] That part of error variance not predictable from quantity of output. Higher values indicate superior quality.

*$p < .05$ (one-tailed test).

**$p < .01$ (one-tailed test).

Table 2

Descriptions on Work Itself/Work Environment Description Questionnaire (WI/WED) of Low Job Structural Attributes (LJSA) and High Job Structural Attributes (HJSA) After Performing the Task

WI/WED for:	LJSA Condition[a] M	SD	HJSA Condition[a] M	SD	t
Learning New Skills	1.33	.70	1.98	1.16	-3.19***
Task Identity	2.42	.97	4.24	1.09	-8.39***
Responsibility	3.09	1.41	4.24	1.13	-4.29***
External Feedback	1.13	.41	1.36	.83	-1.61
Total	7.98	2.07	11.82	2.49	-7.96***

[a] n = 45 for each group.

***$p < .001$ (one-tailed test).

Table 3

Descriptions on Attribute Description Scale (ADS) of Low Job Structural Attributes (LJSA) and High Job Structural Attributes (HJSA) After Performing the Task

ADS for:	LJSA Condition[a] M	LJSA Condition[a] SD	HJSA Condition[a] M	HJSA Condition[a] SD	t
Learning New Skills	20.00	12.02	25.58	16.44	-1.84*
Task Identity	19.96	20.87	51.64	15.28	-8.22***
Responsibility	27.89	11.36	41.56	9.56	-6.18***
External Feedback	24.82	7.27	30.73	10.05	-3.20***
Total	92.67	32.57	149.51	33.46	-8.17***

[a] $n = 45$ for each group.

*$p < .05$ (one-tailed test).

***$p < .001$ (one-tailed test).

indicating that all manipulated job attributes and the sum of these task characteristics were seen as significantly greater in the high treatment.

Relationship Between Predictors and Performance Measures by Condition

Tables 4 through 8 present the relationships between selected ability and personality measures and the number of jobs completed by the research participants. The associations among Wesman mental abilities and the number of jobs completed are shown in Table 4. Significant relationships in both the high and low job structural attribute conditions indicate that individuals scoring higher on both verbal and numerical abilities tend to complete more work. Cognitive style was also associated with quantity of output. Table 5 indicates that field independent participants tended to complete the greatest number of jobs. Thornton and Richards (1969) have demonstrated that tests scored in terms of items per time necessitate a reciprocal transformation to correct for inherent curvilinearity. This appropriate transformation was applied to Group Embedded Figures Test results to produce the inverse scores in Table 5.

The associations between Selective Attention Test scores and number of jobs completed are shown in Table 6. The pattern of correlations indicates that those individuals making the lowest number of Selective Attention Test errors tended to complete the largest quantity of work.

Certain personality variables also appear to be related to the number of jobs completed. Data presented in Table 7 indicates that, in the high job structural attribute condition, those individuals with low interpersonal relations scores tended to do the

Table 4

Correlations of Wesman Personnel Classification Test with Number of Jobs Completed

	Jobs Completed (Total)	Jobs Completed (Hour One)	Jobs Completed (Hour Two)	Jobs Completed (Hour Three)
Verbal				
HJSA[a]	.33*	.37*	.23	.30*
LJSA[a]	.19	.25	.23	.08
Numerical				
HJSA	.39**	.44**	.32*	.32*
LJSA	.43**	.42**	.28	.43**
Total Score				
HJSA	.40**	.45**	.30*	.35*
LJSA	.35*	.39**	.30*	.26

[a] $n = 45$ for each group.

*$p < .05$.

**$p < .01$.

Table 5

Correlations of Cognitive Style Measures with Number of Jobs Completed

	Jobs Completed (Total)	Jobs Completed (Hour One)	Jobs Completed (Hour Two)	Jobs Completed (Hour Three)
RFT				
HJSA[a]	-.23	-.27	-.17	-.19
LJSA[a]	-.01	.03	-.09	.03
GEFT Raw Scores				
HJSA	.44**	.41**	.36*	.42**
LJSA	.33*	.36*	.33*	.23
GEFT Inverse Scores				
HJSA	-.41**	-.47***	-.31*	-.35*
LJSA	-.20	-.26	-.21	-.10

[a] $n = 45$ for each group.

*$p < .05$.

**$p < .01$.

***$p < .001$.

Table 6

Correlations of Selective Attention Test with Number of Jobs Completed

	Jobs Completed (Total)	Jobs Completed (Hour One)	Jobs Completed (Hour Two)	Jobs Completed (Hour Three)
PART I				
Intrusions				
HJSA[a]	-.26	-.31*	-.21	-.21
LJSA[a]	-.15	-.06	-.19	-.16
Omissions				
HJSA	-.35*	-.26	-.28	-.39**
LJSA	-.45**	-.35*	-.49***	-.39**
False Alarms				
HJSA	-.19	-.24	-.29*	-.01
LJSA	-.19	-.23	-.19	-.12
PART II				
Intrusions				
HJSA	-.16	-.09	-.11	-.22
LJSA	-.19	-.10	-.18	-.21
Omissions				
HJSA	-.29	-.23	-.32*	-.25
LJSA	-.16	-.18	-.12	-.14
False Alarms				
HJSA	-.05	-.12	-.08	-.02
LJSA	.00	-.06	-.09	.12
Completely Correct				
HJSA	.43**	.34*	.47***	.35*
LJSA	.21	.23	.17	.16

[a] $n = 45$ for each group. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 7

Correlations of Orientation Inventory with Number of Jobs Completed

	Jobs Completed (Total)	Jobs Completed (Hour One)	Jobs Completed (Hour Two)	Jobs Completed (Hour Three)
Self				
HJSA[a]	.16	.02	.14	.24
LJSA[a]	-.04	-.01	.01	-.09
Persons				
HJSA	-.32*	-.29*	-.20	-.38**
LJSA	-.02	-.08	.03	-.01
Task				
HJSA	.17	.27	.07	.14
LJSA	.05	.07	-.04	.08

[a] n = 45 for each group.

*$p < .05$.

**$p < .01$.

most work, while Table 8 shows that, in this same treatment, participants having high scores on the Pro-Protestant Ethic Scale completed the largest number of jobs.

Tables 9 through 12 present the associations among selected individual difference measures and the average length of time participants spent working on each of the jobs they completed. As would be expected based on Table 4, data shown in Table 9 indicate that those participants with the highest verbal and numerical abilities tended to work fastest in both conditions. Several of these correlations are moderately strong, being above .4. Table 10, like Table 5, indicates that measures of cognitive style are associated with work speed. Examination of these two tables reveals differences, however; in Table 10 Rod and Frame scores are shown to be significantly related to work speed, while this was not apparent in Table 5.

Table 11, as would be predicted from Table 6, indicates that those producing the lowest number of errors on the Selective Attention Test tended to work fastest in both conditions. Examination of Table 12 reveals that, in the low condition, the more extraverted participants tended to take the shortest average time for each job they completed.

Table 13 presents the relationships between the Hand Skills Test and the average time participants spent not working between jobs. The data indicates that in the high job structural attribute condition, more persistent individuals (higher Hand Skills Test scores) wasted less time not working between jobs. It is interesting to note that this relationship is strongest in Hour Three apparently indicating that persistent individuals

Table 8

Correlations of Protestant Ethic Scale with Number of Jobs Completed

	Jobs Completed (Total)	Jobs Completed (Hour One)	Jobs Completed (Hour Two)	Jobs Completed (Hour Three)
Pro-Protestant Ethic				
HJSA[a]	.35*	.28	.33*	.32*
LJSA[a]	.15	.25	.11	.07
Non-Protestant Ethic				
HJSA	-.19	-.11	-.16	-.22
LJSA	.16	.12	.02	.26

[a] n = 45 for each group.

*$p < .05$.

Table 9

Correlations of Wesman Personnel Classification Test with Average Time Per Job

	Average Time Per Job (Total)	Average Time Per Job (Hour One)	Average Time Per Job (Hour Two)	Average Time Per Job (Hour Three)	Average Time Per Job (First 8 Jobs)
Verbal					
HJSA[a]	-.36*	-.40**	-.17	-.37*	-.32*
LJSA[a]	-.18	-.27	-.19	-.05	-.24
Numerical					
HJSA	-.44**	-.46***	-.28	-.43**	-.40**
LJSA	-.39**	-.38**	-.23	-.46**	-.33*
Total Score					
HJSA	-.44**	-.48**	-.24	-.44**	-.40**
LJSA	-.32*	-.38**	-.26	-.26	-.34*

[a] n = 45 for each group.

*$p < .05$.

**$p < .01$.

***$p < .001$.

Table 10

Correlations of Cognitive Style Measures with

Average Time Per Job

	Average Time Per Job (Total)	Average Time Per Job (Hour One)	Average Time Per Job (Hour Two)	Average Time Per Job (Hour Three)	Average Time Per Job (First 8 Jobs)
RFT					
HJSA[a]	.36*	.54***	.16	.29*	.36*
LJSA[a]	-.04	.04	-.06	-.10	-.02
GEFT Raw Scores					
HJSA	-.48***	-.45**	-.32*	-.49***	-.44**
LJSA	-.24	-.26	-.22	-.16	-.27
GEFT Inverse Scores					
HJSA	.52***	.63***	.25	.51***	.49**
LJSA	.13	.18	.08	.09	.16

[a] $n = 45$ for each group.

*$p < .05$.

**$p < .01$.

***$p < .001$.

Table 11

Correlations of Selective Attention Test with

Average Time Per Job

	Average Time Per Job (Total)	Average Time Per Job (Hour One)	Average Time Per Job (Hour Two)	Average Time Per Job (Hour Three)	Average Time Per Job (First 8 Jobs)
PART I					
Intrusions					
HJSA[a]	.24	.14	.27	.23	.27
LJSA[a]	.15	.20	.10	.13	.15
Omissions					
HJSA	.29*	.13	.29*	.31*	.26
LJSA	.47***	.49***	.41**	.41**	.46***
False Alarms					
HJSA	.19	.19	.28	.04	.29*
LJSA	.19	.36*	.11	.09	.26
PART II					
Intrusions					
HJSA	.13	.04	.06	.23	.10
LJSA	.20	.19	.15	.22	.17
Omissions					
HJSA	.18	.07	.23	.17	.18
LJSA	.16	.18	.06	.21	.11
False Alarms					
HJSA	.03	.01	.12	-.03	.08
LJSA	.00	.10	.01	-.09	.05
Completely Correct					
HJSA	-.37*	-.21	-.41**	-.36*	-.36*
LJSA	-.21	-.25	-.12	-.22	-.17

[a] n = 45 for each group. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 12

Correlations of Maudsley Personality Inventory with Average Time Per Job

	Average Time Per Job (Total)	Average Time Per Job (Hour One)	Average Time Per Job (Hour Two)	Average Time Per Job (Hour Three)	Average Time Per Job (First 8 Jobs)
Extraversion					
HJSA[a]	.17	.15	.09	.18	.15
LJSA[a]	-.34*	-.23	-.40**	-.30*	-.32*
Neuroticism					
HJSA	.05	.02	-.10	-.05	.02
LJSA	-.07	-.03	-.05	-.11	-.03

[a] n = 45 for each group.

*$p < .05$.

**$p < .01$.

Table 13

Correlations of Hand Skills Test with

Average Time Between Jobs

	Average Time Between Job (Total)	Average Time Between Job (Hour One)	Average Time Between Job (Hour Two)	Average Time Between Job (Hour Three)	Average Time Between Job (First 8 Jobs)
Hand Skills Test					
HJSA[a]	-.37*	-.16	-.19	-.48***	-.21
LJSA[a]	-.08	-.07	-.08	-.05	-.07

[a] n = 45 for each group.

*$p < .05$.

**$p < .001$.

continued to persevere throughout the experimental period in contrast to others who were apparently less prone to press forward rapidly toward the end of the session.

Tables 14 and 15 indicate that field independent individuals and those participants with the highest levels of numerical ability tended to produce the highest quality work. While numerical ability was associated with quality only in the low condition, special cognitive style abilities demonstrated significant relationships in both treatments.

Table 16 is particularly interesting in that it presents reversals in individual differences to quality associations across conditions. While those producing the smallest number of mistakes on the Selective Attention Test tended to demonstrate the highest quality work in the low condition, a trend in the opposite direction appears to be evident for high treatment participants. As shown in Table 16, several significant differences in correlation coefficients are evident when the two treatments are compared.

The quality of work produced in the high condition also appears to be related to persistence as shown in Table 17. Those persistent participants scoring higher on the Hand Skills Test tended to find fewer errors, thereby producing lower quality work. While persistence may be useful in stimulating individuals to move on rapidly from one task to the next (Table 13), it is apparently not functional in detecting errors within the jobs completed.

Table 14

Correlations of Wesman Personnel Classification Test with Errors Correctly Identified

	Errors Correctly Identified (Total)	Errors Correctly Identified (Hour One)	Errors Correctly Identified (Hour Two)	Errors Correctly Identified (Hour Three)	Errors Correctly Identified (First 8 Jobs)
Wesman Verbal					
HJSA[a]	.05	.03	.09	-.02	.06
LJSA	-.13	-.01	-.13	-.07	-.15
Numerical					
HJSA	.23	.12	.23	.07	.15
LJSA	.37*	.41**	.28	.31*	.35*
Total Score					
HJSA	.14	.07	.17	.02	.11
LJSA	.08	.19	.04	.11	.05

[a] $n = 45$ for each group.

*$p < .05$.

**$p < .01$.

Table 15

Correlations of Cognitive Style Measure with

Errors Correctly Identified

	Errors Correctly Identified (Total)	Errors Correctly Identified (Hour One)	Errors Correctly Identified (Hour Two)	Errors Correctly Identified (Hour Three)	Errors Correctly Identified (First 8 Jobs)
RFT					
HJSA[a]	-.23	-.40**	-.02	.09	-.43**
LJSA	.05	.15	.04	-.01	.09
GEFT Raw Scores					
HJSA	.14	.36*	.05	-.04	.17
LJSA	.14	.09	.11	.14	.09
GEFT Inverse Scores					
HJSA	-.30*	-.49***	-.14	.01	-.37*
LJSA	-.35*	-.05	-.40**	-.24	-.31*

[a] $n = 45$ for each group.

*$p < .05$.

**$p < .01$.

***$p < .001$.

Table 16

Correlations of Selective Attention Test with

Errors Correctly Identified

	Errors Correctly Identified (Total)	Errors Correctly Identified (Hour One)	Errors Correctly Identified (Hour Two)	Errors Correctly Identified (Hour Three)	Errors Correctly Identified (First 8 Jobs)
PART I					
Intrusions					
HJSA[a]	.06	-.12	.11	.07	.07
LJSA[a]	.12	.06	-.02	.11	.10
Omissions					
HJSA	.19	-.11	.16	.11	.11
LJSA	-.09	-.15	-.19	-.06	-.13
False Alarms					
HJSA	.03	-.07	.14	-.12	.10
LJSA	.11	-.08	.17	.05	.11
PART II					
Intrusions					
HJSA	.15	.04	.01	.18	.14
LJSA	-.01	.06	-.15	.03	-.06
Omissions					
HJSA	.34*≠	.17	.19	.09	.28
LJSA	-.31*	-.17	-.39*≠	-.14	-.37*≠
False Alarms					
HJSA	-.05	.13	.00	-.15	.19
LJSA	-.04	.11	-.02	-.05	-.03
Completely Correct					
HJSA	-.29	-.10	-.17	-.08	-.25
LJSA	.34*≠	.22	.28	.24	.35*≠

[a] $n = 45$ for each group. *$p < .05$.

≠Correlation coefficients significantly different from each other for the two tasks ($p < .01$).

Table 17

Correlations of Hand Skills Test with

Errors Correctly Identified

	Errors Correctly Identified (Total)	Errors Correctly Identified (Hour One)	Errors Correctly Identified (Hour Two)	Errors Correctly Identified (Hour Three)	Errors Correctly Identified (First 8 Jobs)
Hand Skills Test					
HJSA[a]	-.41**	-.18	-.34*	-.15	-.31*
LJSA[a]	.08	.12	-.05	.22	-.18

[a] n = 45 for each group.

*$p < .05$.

**$p < .01$.

Relationship Between Predictors and Measures of Affect by Condition

Tables 18 through 20 relate selected predictors with reported participant satisfaction. Significant associations exist among both Wesman general verbal and numerical abilities (Table 18) and special cognitive style abilities (Table 19) and satisfaction in the high condition only. Table 18 data indicates that those with lower general mental abilities tended to report greater work satisfaction. Table 19 shows that field dependent participants, as measured by both the Rod and Frame and Group Embedded Figures Test, tended to report being more satisfied with the work.

A positive association existed between adherence to the Protestant Ethic and work satisfaction in the high condition (Table 20). Such a relationship is not surprising since adherence to the Protestant Ethic reflects a tendency to value larger tasks with increased responsibility. Since these dimensions were represented as present in the high condition, it was reasonable to expect that those individuals who valued the attributes would be most satisfied with the work.

Affective responses to tasks can be described along numerous dimensions. Tables 21 through 25 present associations among selected individual differences and perceptions of tasks in terms of their intrinsic worth, attractiveness and complexity, the competence required to perform the work and the affective tone, arousal and motivation generated by the work. Examination of Table 21 indicates that field dependent participants described the high condition job as more complex while experiencing a more positive general affective tone and level of

Table 18

Correlations of Wesman Personnel Classification Test with Satisfaction

	Work Satisfaction
Verbal	
HJSA[a]	-.36*
LJSA[a]	.01
Numerical	
HJSA	-.30*
LJSA	.21
Total	
HJSA	-.37*
LJSA	.10

[a] n = 45 for each group.

*$p < .05$.

Table 19

Correlations of Cognitive Style Measures with Satisfaction

	Work Satisfaction
RFT	
HJSA[a]	.32*
LJSA[a]	.02
GEFT Raw Scores	
HJSA	-.29*
LJSA	-.09
GEFT Inverse Scores	
HJSA	.37*
LJSA	.03

[a] n = 45 for each group.

*$p < .05$.

Table 20

Correlations of Protestant Ethic Scale with Satisfaction

	Work Satisfaction
Pro-Protestant Ethic	
HJSA[a]	.37*
LJSA[a]	.25
Non-Protestant Ethic	
HJSA	.08
LJSA	-.22

[a] $n = 45$ for each group.

*$p < .05$.

Table 21

Correlations of Cognitive Style Measures with Task Description Scale

	Intrinsic Job Worth	Task Attractiveness	General Affective Tone	General Arousal	Personal Competence	Job Complexity
RFT						
HJSA[a]	.18	.24	.34*	.24	.09	.27
LJSA[a]	-.01	.02	.18	.34*	.27	.06
GEFT Raw Scores						
HJSA	-.10	-.23	-.18	-.12	.06	-.35*
LJSA	-.12	-.14	-.22	-.22	-.06	-.13
GEFT Inverse Scores						
HJSA	.14	.25	.24	.18	.00	.35*
LJSA	-.01	.01	.00	.03	-.02	.04

[a] $n = 45$ for each group.

*$p < .05$.

arousal. Table 22 shows that self-oriented individuals responded more positively to the high condition job, while task-oriented participants described the low condition job as lower in worth, attractiveness, and complexity, and were less positively affected by its structural characteristics.

Consistent with Table 20, those individuals reporting the strongest adherence to the Protestant Ethic responded most positively to the high condition task (Table 23). Not only did they describe the job as being attractive and complex, but they also reported experiencing substantially higher levels of general arousal while engaged in the work provided

Both ability and personality measures appear to be related to intrinsic motivation. Data in Table 24 indicates that participants with better memories, as measured by the Picture-Number Test, reported stronger intrinsic motivation in the high condition. The Pro-Protestant Ethic scale was also related to intrinsic motivation (Table 25). In both the high and low treatments, those individuals indicating the strongest adherence to the Protestant Ethic reported the highest levels of intrinsic motivation. As would be expected, these individuals who value work most highly feel best about themselves when they believe they are doing a good job.

Preference for Job Structural Attributes (APS) Related to Performance on the Maintenance Task

Tables 26 through 28 present the associations among preferences for job structural attributes, as measured by the Attribute Preference Scale, and indices of quantity, quality, and satisfaction. Consistently, across these tables, the total

Table 22

Correlations of Orientation Inventory with Task Description Scales

	Intrinsic Job Worth	Task Attractiveness	General Affective Tone	General Arousal	Personal Competence	Job Complexity
Self						
HJSA[a]	.32*	.34*	.25	.26	.24	.30*
LJSA[a]	.25	.22	.15	.19	.19	.13
Persons						
HJSA	-.03	-.15	-.01	-.17	-.15	-.27
LJSA	.12	.16	.19	.05	-.02	.18
Task						
HJSA	-.27	-.18	-.23	-.08	-.07	-.02
LJSA	-.36*	-.38*	-.34*	-.24	-.17	-.31*

[a] $n = 45$ for each group.

*$p < .05$.

Table 23

Correlations of Protestant Ethic Scale with Task Description Scales

	Intrinsic Job Worth	Task Attractiveness	General Affective Tone	General Arousal	Personal Competence	Job Complexity
Pro-Protestant Ethic						
HJSA[a]	.27	.32*	.20	.48***	.27	.32*
LJSA[a]	.13	.13	.14	.15	.08	.10
Non-Protestant Ethic						
HJSA	-.10	-.01	.04	-.16	-.24	.11
LJSA	.01	.00	.06	-.03	.06	-.01

[a] $n = 45$ for each group.

*$p < .05$.

***$p < .001$.

Table 24

Correlations of Picture-Number Test with Intrinsic Motivation

	Intrinsic Motivation
Part I	
HJSA[a]	.44**
LJSA[a]	.03
Part II	
HJSA	.26
LJSA	-.01
Total	
HJSA	.38**
LJSA	.01

[a] n = 45 for each group.

** $p < .01$.

Table 25

Correlations of Protestant Ethic Scale with Intrinsic Motivation

	Intrinsic Motivation
Pro-Protestant Ethic	
HJSA[a]	.37*
LJSA[a]	.30*
Non-Protestant Ethic	
HJSA	-.06
LJSA	-.12

[a] $n = 45$ for each group.

*$p < .05$.

Attribute Preference Scale score show a stronger pattern of correlations with the outcome measures of interest than do any of the individual preference scales. Specifically, in Table 26, data indicates that participants having the highest preferences for the total of the four manipulated task characteristics tended to consistently complete jobs more rapidly in both conditions. While the majority of the individual scales tend to contribute to these overall results, few of these correlations reached significance.

A highly similar pattern is evident in Table 27 when Attribute Preference Scale scores are related to quality. Again, those with the highest total preferences tended to turn out the best work. While scattered significant correlations do exist indicating that preferences for the individual dimension scales are related to higher quality work, the pattern and magnitude of these outcomes seems most evident at the total Attribute Preference Scale level.

Table 28 shows that total preferences for job structural attributes are negatively associated with work satisfaction in the high condition. At first, the direction and magnitude of this relationship seems surprising. The apparent explanation for this outcome may lie in the fact that, even in this high condition, preferences for task attributes typically exceed the amount of these characteristics described as present in the task (Table 29). The negative correlation appears to reflect the fact that those individuals most satisfied are the participants in the high condition who have the lowest preferences for job structural attributes. This information is

Table 26

Correlations of Attribute Preference Scale with Average Time Per Job

	Average Time Per Job (Total)	Average Time Per Job (Hour One)	Average Time Per Job (Hour Two)	Average Time Per Job (Hour Three)	Average Time Per Job (First 8 Jobs)
Learning New Skills					
HJSA[a]	-.16	-.36*	-.05	-.12	-.19
LJSA[a]	-.21	-.21	-.23	-.07	-.25
Task Identity					
HJSA	-.11	-.19	-.13	-.01	-.18
LJSA	-.28	-.20	-.31*	-.27	-.26
Responsibility					
HJSA	-.22	-.26	-.11	-.24	-.20
LJSA	-.21	-.20	-.10	-.30*	-.17
External Feedback					
HJSA	-.06	-.03	-.07	-.07	.00
LJSA	.14	.12	.16	.04	.17
APS Total					
HJSA	-.36*	-.56***	-.13	-.30*	-.37*
LJSA	-.37*	-.33*	-.30*	-.40**	-.34*

[a] n = 45 for each group. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 27

Correlations of Attribute Preference Scale with Errors Correctly Identified

	Errors Correctly Identified (Total)	Errors Correctly Identified (Hour One)	Errors Correctly Identified (Hour Two)	Errors Correctly Identified (Hour Three)	Errors Correctly Identified (First 8 Jobs)
Learning New Skills					
HJSA[a]	.24	.05	.14	.17	.12
LJSA[a]	.05	-.04	-.13	.26	-.10
Task Identity					
HJSA	.31*	.04	.15	.39**	.00
LJSA	.10	.13	.11	.09	.00
Responsibility					
HJSA	.01	.23	-.03	-.23	.22
LJSA	.32*	.36*	.36*	.15	.36*
External Feedback					
HJSA	.15	.34*	-.02	.00	.32*
LJSA	.05	.08	.22	-.21	.18
APS Total					
HJSA	.41**	.39**	.14	.15	.40**
LJSA	.36*	.37*	.39**	.19	.31*

[a] n = 45 for each group. *$p < .05$. **$p < .01$.

Table 28

Correlations of Attribute Preference Scales with Work Satisfaction

Attribute Preference Scales	Work Satisfaction
Learning New Skills	
HJSA[a]	-.39**
LJSA[a]	-.16
Task Identity	
HJSA	-.15
LJSA	-.04
Responsibility	
HJSA	-.11
LJSA	.05
External Feedback	
HJSA	-.09
LJSA	.15
APS Total	
HJSA	-.48***
LJSA	.02

[a] $n = 45$ for each group.

** $p < .01$.

*** $p < .001$.

Table 29

Individual Descriptions of Tasks Minus Individual Preferences for Job Structural Attributes

	Non-Absolute Differences		
	M	SD	t
Described Minus Preferred			
HJSA[a]	-38.02	37.96	7.17***
LJSA[a]	-94.04	36.16	

[a] n = 45 for each group.

***$p < .001$.

presented in Tables 30 and 31. The analyses were conducted by dividing all participants into the four categories shown in Table 31. Specifically, high condition participants were divided into those having high and low preferences for job structural attributes. The same median split was made for low condition individuals. The one-way analysis of variance presented in Table 30 indicates that significant differences in work satisfaction exist across these four groups and the Duncan's multiple range test outcomes in Table 31 indicate that those who were most satisfied were the high condition, low preference participants who experienced the closest match between described and preferred levels of job structural attributes.

Preferences for Job Structural Attributes (APS) Related to Selected Variables

Tables 32 and 33 may be interpreted as offering partial explanations for the relationships between preferences and both quantity and quality depicted in Tables 26 and 27. From Tables 32 and 33, it can be seen that both Wesman general mental ability and field independence, a special mental ability, are positively associated with high preferences for job structural attributes. The relationships of abilities and preferences for learning new skills are particularly important within both of these tables. These outcomes might be interpreted as being consistent with an argument that one of the reasons participants with high preferences for job structural attributes produced better quantity and quality was that they had high levels of the general and specific abilities relevant to producing those outcomes.

Table 30

Analysis of Variance of Work Satisfaction as a Function of Manipulated Condition and Preference for Job Structural Attributes

Sources of Variation	SS	df	MS	F	p
Between Groups	578.92	3	192.97	2.78	$<.05$
Within Groups	5973.57	86	69.46		
Total	6552.49	89			

Table 31

Measures of Central Tendency and Dispersion for Work Satisfaction

	Work Satisfaction	
	M	SD
HJSA AND High APS[a]	12.52	6.19
HJSA and Low APS[b]	17.86+	9.03
LJSA and High APS[a]	11.21	7.82
LJSA and Low APS[b]	12.59	9.94

[a] $n = 23$.

[b] $n = 22$.

+Cell value found to be significantly different from each of the other three cell means using a Duncan's multiple range test ($p < .05$).

Table 32

Correlations of Wesman Personnel Classification Test with Attribute Preference Scales

	Learning New Skills	Task Identity	Responsi-bility	External Feedback	Total
Verbal	.27**	.08	-.08	-.09	.13
Numerical	.27**	-.01	.17	.02	.33**
Total	.32**	.05	.02	-.06	.24*

$n = 90$.

*$p < .05$.

**$p < .01$.

Table 33

Correlations of Cognitive Style Measures with Attribute Preference Scales

	Learning New Skills	Task Identity	Responsi-bility	External Feedback	Total
RFT	-.22*	-.02	-.07	.09	-.17
GEFT Raw Scores	.27**	.03	.06	-.17	.16
GEFT Inverse Scores	-.30**	.02	-.12	.07	-.26*

$n = 90$.

*$p < .05$.

**$p < .01$.

Tables 34 and 35 indicate that selected personality characteristics are also related to preferences for job structural attributes. Particularly evident, as would be expected, are the associations between intrinsic work values and preferences for the manipulated job characteristics. This is evident in Table 34 where each of the intrinsic scales from the Survey of Work Values (activity preference, job involvement, and pride in work) and their sum all display strong positive relationships with preference for responsibility and the sum of the four manipulated job structural attributes. A similar pattern is evident in Table 35 with those expressing the strongest adherence to the Protestant Ethic also reporting the highest preferences for responsibility and total manipulated job structural attributes.

Description of Job Structural Attributes (ADS) Related to Maintenance Task Outcomes

Table 36 displays the relationships between average time between job measures and the way participants describe the experimental tasks in terms of job structural attributes. Particularly interesting are the relationships to external feedback. In the low condition (no feedback provided), participants who described the task as having the highest levels of feedback tended to spend the longest periods of time not working between jobs. Conversely, this situation is significantly reversed in the high treatment with those individuals who describe the job as providing the greatest amount of feedback being the participants who move most rapidly from one task to the next.

Table 37 provides data indicating that those participants who describe the task as highest in opportunities to learn new

Table 34

Correlations of Survey of Work Values with Attribute Preference Scales

Survey of Work Values	Learning New Skills	Task Identity	Responsi-bility	External Feedback	Total
Earnings	-.02	.01	-.22*	.09	-.13
Social Status	.01	.06	-.04	.00	.01
Upward Striving	-.19	-.02	.23*	.08	.07
Activity Preference	-.14	.22*	.41***	.20	.44***
Job Involvement	-.29**	.18	.40***	.24*	.33**
Pride in Work	-.24*	.10	.37***	.21*	.28**
Intrinsic	-.28**	.21*	.49***	.27*	.44***
Extrinsic	-.01	.04	-.16	.06	-.07

$n = 90$.

*$p < .05$.

**$p < .01$.

***$p < .001$.

Table 35

Correlations of Protestant Ethic Scale with

Attribute Preference Scales

	Learning New Skills	Task Identity	Responsi-bility	External Feedback	Total
Pro-Protestant Ethic	-.18	-.05	.40***	.19	.26*
Non-Protestant Ethic	.10	.07	-.28**	-.13	-.17

$n = 90$.

*$p < .05$.

**$p < .01$.

***$p < .001$.

Table 36

Correlations of Attribute Description Scales with Average Time Between Jobs

	Average Time Between Jobs (Total)	Average Time Between Jobs (Hour One)	Average Time Between Jobs (Hour Two)	Average Time Between Jobs (Hour Three)	Average Time Between Jobs (First 8 Jobs)
Learning New Skills					
HJSA[a]	-.08	.08	-.04	-.18	.05
LJSA[a]	.15	.17	.24	.06	.16
Task Identity					
HJSA	.07	.09	-.03	.11	.08
LJSA	.20	.24	.22	.10	.21
Responsibility					
HJSA	-.06	.10	-.12	-.10	.05
LJSA	.23	.26	.20	.19	.21
External Feedback					
HJSA	-.31*≠	-.12	-.47***#	-.22	-.18
LJSA	.32*	.26	.29*	.29*≠	.32*
ADS Total					
HJSA	-.11	.07	-.21	-.13	.02
LJSA	.33*	.34*	.36*≠	.21	.34*

[a] n = 45 for each group. *$p < .05$. ***$p < .001$.

≠Correlation coefficients significantly different from each other for the two tasks ($p < .01$).

#Correlation coefficients significantly different from each other for the two tasks ($p < .001$).

Table 37

Correlations of Attribute Description Scale with Satisfaction

	Work Satisfaction
Learning New Skills	
HJSA[a]	.43**
LJSA[a]	.49***
Task Identity	
HJSA	.17
LJSA	.27
Responsibility	
HJSA	.26
LJSA	.25
External Feedback	
HJSA	.34*
LJSA	.04
ADS Total	
HJSA	.47***
LJSA	.45**

[a] $n = 45$ for each group

*$p < .05$.

**$p < .01$.

***$p < .001$.

skills and total job structural attributes are most satisfied with the work itself. These relationships are significant and positive in both the high and low conditions.

Table 38 presents relationships among descriptions of the task in terms of job structural attributes and affective responses to those task characteristics. Significant relationships are more numerous in the high condition with those who describe the task as highest in task identity, learning new skills, and the sum of the manipulated job structural attributes seeing the job as more worthwhile, attractive, and responsible for positive affective feelings.

Description of Job Structural Attributes (ADS) Related to Selected Variables

Table 39 presents the correlations of the Attribute Description Scale and Wesman scores. Several interesting reversals occur across conditions. Particularly evident in the high treatment is the fact that individuals with higher levels of Wesman general mental ability tend to describe the task as lower in opportunities for learning new skills and total job structural attributes. Similar results are evident in Table 40 where special cognitive style abilities are associated with the Attribute Description Scale. Field independent participants also tended to describe the high condition task as lower in opportunities to learn new skills and total described job structural attributes.

Tables 41 through 43 indicate that selected personality variables also affected the manner in which participants described their tasks. In Table 41, for example, it is evident that those scoring higher on the intrinsic work scale and on each of its activity preference, job involvement, and pride in work component

Table 38

Correlations of Attribute Description Scale with Task Description Scales

	Intrinsic Job Worth	Task Attractiveness	General Affective Tone	General Arousal	Personal Competence	Job Complexity
Learning New Skills						
HJSA[a]	.31*	.33*	.34*	.25	.03	.29*
LJSA[a]	.12	.17	-.01	.27	.21	.19
Task Identity						
HJSA	.36*	.31*	.32*	.21	.08	.19
LJSA	.21	.24	.31*	.24	.01	.23
Responsibility						
HJSA	.19	.10	-.03	-.10	-.06	-.03
LJSA	-.08	.07	-.08	-.17	-.08	.27
External Feedback						
HJSA	.17	.15	.04	-.04	-.03	.10
LJSA	-.18	-.13	-.09	.02	-.06	-.02
ADS Total						
HJSA	.42**	.38**	.32*	.17	.02	.25
LJSA	.11	.21	.15	.20	.04	.30*

[a] n = 45 for each group.

*$p < .05$.

**$p < .01$.

Table 39

Correlations of Wesman Personnel Classification Test with Attribute Description Scales

	Learning New Skills	Task Identity	Responsi-bility	External Feedback	Total
Wesman Verbal					
HJSA[a]	-.54***#	-.05	-.27	-.19	-.42**+
LJSA[a]	.17	.21	-.10	-.17	.12
Numerical					
HJSA	-.38*≠	.10	-.11	-.24	-.24
LJSA	.18	-.03	.05	.13	.09
Total					
HJSA	-.53***#	.02	-.23	-.24	-.39**+
LJSA	.22	.14	-.05	-.07	.14

[a] n = 45 for each group.

+Correlation coefficients significantly different from each other for the two tasks ($p < .05$).

≠Correlation coefficients significantly different from each other for the two tasks ($p < .01$).

#Correlation coefficients significantly different from each other for the two tasks ($p < .001$).

*$p < .05$.

**$p < .01$.

***$p < .001$.

Table 40

Correlations of Cognitive Style Measures with Attribute Description Scales

	Learning New Skills	Task Identity	Responsi-bility	External Feedback	Total
RFT					
HJSA[a]	.50***	.07	-.05	.24	.33*
LJSA[a]	.30*	.09	.11	.01	.21
GEFT Raw Scores					
HJSA	-.42**	-.16	.00	-.20	-.34*
LJSA	-.21	-.28	-.24	.14	-.31*
GEFT Inverse Scores					
HJSA	.45**	.15	-.06	.17	.32*
LJSA	.15	.28	.27	-.30*	.26

[a] $n = 45$ for each group.

*$p < .05$.

**$p < .01$.

***$p < .001$.

Table 41

Correlations of Survey of Work Values with

Attribute Description Scales

	Learning New Skills	Task Identity	Responsi-bility	External Feedback	Total
Earnings					
HJSA[a]	.23	-.06	-.12	.05	.07
LJSA[a]	-.09	-.16	-.04	-.16	-.18
Social Status					
HJSA	.20	.17	.03	.05	.20
LJSA	.26	-.13	.00	.26	.08
Upward Striving					
HJSA	.39**	.19	.03	.21	.35*
LJSA	.06	-.14	.11	.06	-.02
Activity Preference					
HJSA	.29*	.16	.26	-.01	.28
LJSA	.33*	-.12	.15	.06	.11
Job Involve-ment					
HJSA	.32*	-.01	.22	.07	.24
LJSA	.31*	-.05	.07	.06	.12
Pride In Work					
HJSA	.36*	.28	.25	.03	.39**
LJSA	.38**	-.08	.07	.12	.14

Table 41 (cont'd.)

	Learning New Skills	Task Identity	Responsi-bility	External Feedback	Total
Intrinsic					
HJSA	.38**	.17	.29*	.03	.36*
LJSA	.44**	-.11	.13	.10	.16
Extrinsic					
HJSA	.26	.05	-.06	.06	.15
LJSA	.11	-.17	-.02	.07	-.06

[a] n = 45 for each group.

* $p < .05$.

** $p < .01$.

scales tended to describe the experimental tasks as being higher in opportunities to learn new skills. A similar outcome is apparent for the high condition in Table 42 where individuals professing greater adherence to the Protestant Ethic indicated that their tasks were higher in opportunities to learn new skills and the sum of the four manipulated job structural attributes. Further data presented in Table 43 suggested that individuals high in neuroticism tended to describe their jobs as higher in both responsibility and feedback. These latter results were evident in the high condition only, however.

Absolute Differences in Attribute Preference Scale/Attribute Description Scale Job Structural Attribute Scores Related to Maintenance Task Outcomes

Table 44 presents the associations among the absolute differences in Attribute Description Scale minus Attribute Preference Scale scores and the average time participants spent not working between jobs. Examination of the learning new skills scale reveals an interesting pattern of reversals across conditions with those high treatment participants having the largest absolute differences tending to spend the longest periods not working between tasks.

Absolute Differences in APS/ADS Job Structural Attribute Scores Related to Selected Variables

Table 45 presents the relationships among Wesman scores and absolute differences in Attribute Description Scale minus Attribute Preference Scale scores. In the high condition, those participants with the highest verbal and total mental ability scores tended to also have the largest absolute differences on the external feedback and total manipulated job structural attribute scales.

Table 42

Correlations of Protestant Ethic Scale with

Attribute Description Scales

	Learning New Skills	Task Identity	Responsi-bility	External Feedback	Total
Pro-Protestant Ethic					
HJSA[a]	.40**	.11	.12	.05	.30*
LJSA[a]	.26	-.15	.08	.29*	.09
Non-Protestant Ethic					
HJSA	-.07	-.23	-.07	.14	.12
LJSA	-.32*	-.07	.07	-.26	-.20

[a] $n = 45$ for each group.

*$p < .05$.

**$p < .01$.

Table 43

Correlations of Maudsley Personality Inventory with Attribute Description Scales

	Learning New Skills	Task Identity	Responsi-bility	External Feedback	Total
Extraversion					
HJSA[a]	-.03	.25	-.09	.03	.08
LJSA[a]	.06	-.23	-.09	-.04	-.16
Neuroticism					
HJSA	.19	-.12	.43**	.37*≠	.26
LJSA	-.06	-.07	.02	-.29*	-.13

[a] $n = 45$ for each group.

≠Correlation coefficients significantly different from each other for the two tasks ($p < .01$).

*$p < .05$.

**$p < .01$.

Table 44

Correlations of Absolute Attribute Description Scale (ADS) Minus Attribute Preference Scale (APS) Scores with Average Time Between Jobs

	Average Time Between Jobs (Total)	Average Time Between Jobs (Hour One)	Average Time Between Jobs (Hour Two)	Average Time Between Jobs (Hour Three)	Average Time Between Jobs (First 8 Jobs)
Task Identity |ADS-APS|					
HJSA[a]	-.21	-.22	-.03	-.20	-.21
LJSA[a]	-.06	-.13	-.05	.00	-.11
Responsibility |ADS-APS|					
HJSA	-.01	-.16	.27	-.08	-.12
LJSA	-.07	-.11	-.16	.06	-.09
Learning New Skills |ADS-APS|					
HJSA	.37*≠	.21	.50***#	.27	.27
LJSA	-.29	-.21	-.26	-.28	-.27
External Feedback |ADS-APS|					
HJSA	-.02	-.17	-.06	.11	-.15
LJSA	-.14	-.12	-.25	-.01	-.25

Table 44 (Cont'd.)

	Average Time Between Jobs (Total)	Average Time Between Jobs (Hour One)	Average Time Between Jobs (Hour Two)	Average Time Between Jobs (Hour Three)	Average Time Between Jobs (First 8 Jobs)
Totals ADS Minus APS |ADS-APS|					
HJSA	.08	-.07	.13	.12	-.02
LJSA	-.28	-.27	-.32*+	-.18	-.27

[a] n = 45 for each group.

+Correlation coefficients significantly different from each other for the two tasks ($p < .05$).

≠Correlation coefficients significantly different from each other for the two tasks ($p < .01$).

#Correlation coefficients significantly different from each other for the two tasks ($p < .001$).

*$p < .05$.

***$p < .001$.

Table 45

Correlations of Wesman Personnel Classification Test with Absolute Attribute Description Scale (ADS) Minus Attribute Preference Scale (APS) Scores

	Learning New Skills |ADS-APS|	Task Identity |ADS-APS|	Responsibility |ADS-APS|	External Feedback |ADS-APS|	Total ADS Minus APS |ADS-APS|
Wesman Verbal					
HJSA[a]	.08	.00	.02	.49***≠	.35*+
LJSA[a]	.11	-.03	.10	-.12	-.17
Wesman Numerical					
HJSA	.20	.15	-.11	.24	.16
LJSA	-.13	.14	.10	-.23	.06
Wesman Total					
HJSA	.15	.07	-.04	.44**≠	.30*
LJSA	.02	.04	.12	-.11	-.09

[a] $n = 45$ for both groups.

+Correlation coefficients significantly different from each other for the two tasks ($p < .05$).

≠Correlation coefficients significantly different from each other for the two tasks ($p < .01$).

*$p < .05$.

**$p < .01$.

***$p < .001$.

When Pro-Protestant Ethic scores are considered in Table 46, those scoring highest on this scale tended to have the smallest absolute differences on the external feedback and total manipulated job structural attribute scales in the high condition. These results, combined with Table 45, seem to indicate that those of higher mental ability and lower adherence to the Protestant Ethic are most likely to experience large gaps between their preference for task attributes and the way they describe the high condition task. In contrast, low condition participants high on the Protestant Ethic Scale were more likely to report larger absolute differences between their preferences for responsibility and the way they describe the experimental task.

Non-Absolute Differences in Attribute Preference Scale/Attribute Description Scale Job Structural Attribute Scores Related to Maintenance Task Outcomes

A comparison of Tables 47 through 50 with Table 44 suggests that the relationships among non-absolute Attribute Description Scale minus Attribute Preference Scale scores and task outcome variables are stronger and more consistent than the associations among absolute Attribute Description Scale minus Attribute Preference Scale differences and the outcome variables of interest. Table 47 presents the relationships among these non-absolute differences and the average time participants spent working on the experimental tasks. In both conditions, participants tended to work faster when difference scores were smallest; that is, when preferences were not substantially larger than individuals' descriptions of the tasks in terms of the manipulated dimensions. Examination of Table 48 also indicates that, in the low condition,

Table 46

Correlations of Protestant Ethic Scale with Absolute Attribute Description Scale (ADS) Minus Attribute Preference Scale (APS) Scores

	Learning New Skills |ADS-APS|	Task Identity |ADS-APS|	Responsi-bility |ADS-APS|	External Feedback |ADS-APS|	Total ADS Minus APS |ADS-APS|
Pro-Protestant Ethic					
HJSA[a]	-.05	-.06	-.08	-.38*	-.31*+
LJSA[a]	-.12	.18	.35*+	-.17	.15
Non-Protestant Ethic					
HJSA	-.19	.08	.07	.18	.05
LJSA	.14	.10	-.17	.28	.15

[a] $n = 45$ for both groups.

+Correlation coefficients significantly different from each other for the two tasks ($p < .05$).

*$p < .05$.

Table 47

Correlations of Non-Absolute Attribute Description Scale (ADS) Minus Attribute Preference Scale (APS) Scores with Average Time Per Job

	Average Time Per Job (Total)	Average Time Per Job (Hour One)	Average Time Per Job (Hour Two)	Average Time Per Job (Hour Three)	Average Time Per Job (First 8 Jobs)
Learning New Skills ADS-APS					
HJSA[a]	.22	.33*	.05	.21	.22
LJSA[a]	.19	.13	.25	.09	.19
Task Identity ADS-APS					
HJSA	.24	.18	.23	.24	.25
LJSA	.30*	.19	.38**	.22	.26
Responsibility ADS-APS					
HJSA	.18	.24	.12	.13	.22
LJSA	.24	.31*	.13	.27	.24
External Feedback ADS-APS					
HJSA	.23	.17	.16	.26	.17
LJSA	-.08	-.13	-.01	-.05	-.11
Total ADS Minus APS ADS-APS					
HJSA	.38*	.42**	.22	.36*	.38**
LJSA	.33*	.25	.40**	.26	.30*

[a] $n = 45$ for each group. *$p < .05$. **$p < .01$.

Table 48

Correlations of Non-Absolute Attribute Description Scale (ADS) Minus Attribute Preference Scale (APS) Scores with Average Time Between Jobs

	Average Time Between Jobs (Total)	Average Time Between Jobs (Hour One)	Average Time Between Jobs (Hour Two)	Average Time Between Jobs (Hour Three)	Average Time Between Jobs (First 8 Jobs)
Learning New Skills ADS-APS					
HJSA[a]	-.09	.03	-.04	-.17	.01
LJSA[a]	.14	.12	.25	.01	.15
Task Identity ADS-APS					
HJSA	.12	.09	.11	.11	.11
LJSA	.22	.25	.22	.13	.23
Responsibility ADS-APS					
HJSA	-.03	.10	-.13	-.04	.05
LJSA	.16	.18	.18	.10	.13
External Feedback ADS-APS					
HJSA	-.33*≠	-.20	-.43**≠	-.26	-.25
LJSA	.25	.17	.23	.25	.23

Table 48 (cont'd.)

	Average Time Between Jobs (Total)	Average Time Between Jobs (Hour One)	Average Time Between Jobs (Hour Two)	Average Time Between Jobs (Hour Three)	Average Time Between Jobs (First 8 Jobs)
Total ADS Minus APS ADS-APS					
HJSA	-.13	.02	-.16	-.16	-.01
LJSA	.34*+	.33*	.39**+	.21	.34*

[a]n = 45 for both groups.

+Correlation coefficients significantly different from each other for the two tasks ($p < .05$).

≠Correlation coefficients significantly different from each other for the two tasks ($p < .01$).

*$p < .05$.

**$p < .01$.

those participants who tended to move most rapidly from one job to the next tended to be the individuals whose preference scores exceeded their task descriptions.

When satisfaction is considered in Table 49, greater described minus preferred differences are associated with higher levels of satisfaction. Findings are particularly strong when differences in learning new skills and total manipulated job structural attributes are considered.

Table 50 presents the relationships among non-absolute difference scores and Task Description Scales. As descriptions minus preferences become larger, participants in the high condition indicate the task to be more worthwhile, attractive, complex, and affectively desirable.

Non-Absolute Differences in APS/ADS Job Structural Attribute Scores Related to Selected Variables

Tables 51 and 52 present the associations among Wesman and cognitive style ability measures and Non-Absolute Attribute Description Scale minus Attribute Preference Scale scores. Data in these tables indicate that those participants who demonstrated the highest Wesman ability scores and those who were field independent both tended to experience preference scores which exceeded their descriptions. Highly significant correlations are evident for both external feedback and total manipulated job structural attributes.

Tables 53 and 54 present partially consistent findings regarding non-absolute differences in external feedback. In Table 53, participants high in intrinsic orientation and its subscales, job involvement and pride in work, tend to report high described minus preferred external feedback scores in both conditions.

Table 49

Correlations of Non-Absolute Attribute Description Scale (ADS) Minus Attribute Preference Scale (APS) Scores with Satisfaction

	Work Satisfaction
Learning New Skills ADS-APS	
HJSA[a]	.47***
LJSA[a]	.46**
Task Identity ADS-APS	
HJSA	.23
LJSA	.25
Responsibility ADS-APS	
HJSA	.27
LJSA	.18
External Feedback ADS-APS	
HJSA	.33*
LJSA	-.08
Total ADS Minus APS ADS-APS	
HJSA	.60***
LJSA	.40**

[a] $n = 45$ for both groups.

*$p < .05$.

**$p < .01$.

***$p < .001$.

Table 50

Correlations of Non-Absolute Attribute Description Scale (ADS) Minus Attribute Preference Scale (APS) Scores with Task Description Scales

	Intrinsic Job Worth	Task Attractiveness	General Affective Tone	General Arousal	Personal Competence	Job Complexity
Learning New Skills ADS-APS						
HJSA[a]	.30*	.32*	.27	.23	-.01	.29*
LJSA[a]	.14	.17	.07	.25	.27	.18
Task Identity ADS-APS						
HJSA	.31*	.28	.33*	.26	.09	.19
LJSA	.20	.22	.29*	.26	.00	.20
Responsibility ADS-APS						
HJSA	.21	.19	.04	-.02	.07	.12
LJSA	.02	.15	-.09	-.13	-.10	.31*
External Feedback ADS-APS						
HJSA	.19	.19	.18	-.05	.06	.15
LJSA	-.33*+	-.27	-.28	-.32*	-.27	-.12
Total ADS Minus APS ADS-APS						
HJSA	.45**	.45**	.38**	.23	.07	.36*
LJSA	.09	.18	.09	.12	-.01	.28

[a] $n = 45$ for both groups. *$p < .05$. **$p < .01$.

+Correlation coefficients significantly different from each other for the two tasks ($p < .05$).

Table 51

Correlations of Wesman Personnel Classification Test with Non-Absolute Attribute Description Scale (ADS) Minus Attribute Preference Scale (APS) Scores

	Learning New Skills ADS-APS	Task Identity ADS-APS	Responsibility ADS-APS	External Feedback ADS-APS	Total ADS Minus APS ADS-APS
Wesman Verbal					
HJSA[a]	-.05	-.12	-.12	-.59***#	-.49**≠
LJSA[a]	-.11	.19	.03	.12	.15
Wesman Numerical					
HJSA	-.23	-.08	-.12	-.39**+	-.33*
LJSA	.11	-.01	-.18	.03	-.03
Wesman Total					
HJSA	-.14	-.04	-.13	-.57***#	-.48***≠
LJSA	-.03	.14	-.07	.11	.10

[a] $n = 45$ for both groups.

+Correlation coefficients significantly different from each other for the two tasks ($p < .05$).

≠Correlation coefficients significantly different from each other for the two tasks ($p < .01$).

#Correlation coefficients significantly different from each other for the two tasks ($p < .001$).

*$p < .05$.

**$p < .01$.

***$p < .001$.

Table 52

Correlations of Cognitive Style Measures with Non-Absolute Attribute Description Scale (ADS) Minus Attribute Preference Scale (APS) Scores

	Learning New Skills ADS-APS	Task Identity ADS-APS	Responsibility ADS-APS	External Feedback ADS-APS	Total ADS Minus APS ADS-APS
RFT					
HJSA[a]	.19	.12	.11	.44**	.43**
LJSA[a]	-.19	.01	.06	.28	.09
GEFT Raw Scores					
HJSA	-.18	-.22	-.09	-.40**	-.43**
LJSA	.35*+	-.22	-.25	-.29*	-.24
GEFT Inverse Scores					
HJSA	.20	.20	.11	.45**	.47***
LJSA	-.38*≠	.18	.30*	.22	.20

[a] n = 45 for both groups.

+Correlation coefficients significantly different from each other for the two tasks ($p < .05$).

≠Correlation coefficients significantly different from each other for the two tasks ($p < .01$).

*$p < .05$.

**$p < .01$.

***$p < .001$.

Table 53

Correlations of Survey of Work Values with Non-Absolute Difference of Attribute Description Scale (ADS) Minus Attribute Preference Scale (APS) Score

	Learning New Skills ADS-APS	Task Identity ADS-APS	Responsibility ADS-APS	External Feedback ADS-APS	Total ADS Minus APS ADS-APS
Earnings					
HJSA[a]	-.08	-.03	.13	.19	.13
LJSA[a]	-.08	-.17	.10	-.11	-.14
Social Status					
HJSA	.01	.07	.10	.15	.17
LJSA	.19	-.10	.01	.15	.07
Upward Striving					
HJSA	.06	.19	-.06	.41**	.34*+
LJSA	.04	-.12	-.11	.04	-.09
Activity Preference					
HJSA	-.20	.07	-.21	.29*	.07
LJSA	-.01	-.20	-.10	.29*	-.04
Job Involvement					
HJSA	-.03	-.09	-.14	.37*	.14
LJSA	-.18	-.10	-.23	.34*	-.05
Pride in Work					
HJSA	-.13	.29	-.21	.39**	.26
LJSA	-.03	-.16	-.12	.36*	.00

Table 53 (cont'd.)

	Learning New Skills ADS-APS	Task Identity ADS-APS	Responsi-bility ADS-APS	External Feedback ADS-APS	Total ADS Minus APS ADS-APS
Intrinsic					
HJSA	-.14	.10	-.22	.41**	.18
LJSA	-.10	-.19	-.19	.43**	-.04
Extrinsic					
HJSA	-.05	.02	.14	.21	.18
LJSA	.07	-.16	.06	.03	-.04

[a] n = 45 for both groups.

+Correlation coefficients significantly different from each other for the two tasks ($p < .05$).

*$p < .05$.

**$p < .01$.

Table 54

Correlations of Protestant Ethic Scale with Non-Absolute Difference of Attribut

Description Scale (ADS) Minus Attribute Preference Scale (APS) Scores

	Learning New Skills ADS-APS	Task Identity ADS-APS	Responsi-bility ADS-APS	External Feedback ADS-APS	Total ADS Minus APS ADS-APS
Pro-Protestant Ethic					
HJSA[a]	-.07	.15	-.18	.43**	.25
LJSA[a]	.06	-.14	-.33*	.17	-.11
Non-Protestant Ethic					
HJSA	.24	-.19	.27	-.11	.02
LJSA	-.12	-.12	.17	-.28	-.17

[a] $n = 45$ for both groups.

*$p < .05$.

**$p < .01$.

Similar results are depicted for the high condition only in Table 54, where individuals high in adherence to the Protestant Ethic tend to exhibit higher described minus preferred external feedback scores.

Preference for Job Structural Attributes (WI/WE) Related to Performance on the Maintenance Task

Tables 55 and 56 present the associations among preferences for job structural attributes as measured by the Work Itself/Work Environment Preference Questionnaire and measures of the amount of work completed by research participants. Relationships appear similar, but stronger and more numerous than those shown in Table 27 for the Attribute Preference Scale. In both Tables 55 and 56, those individuals who expressed a high preference for learning new skills tended to turn out more work, having lower average time per jobs in the high condition, while those expressing the highest preferences for task identity and responsibility were most productive in the low treatment. In both conditions, those participants expressing the strongest preferences for total manipulated job structural attributes tended to work most rapidly.

Preferences for Job Structural Attributes (WI/WE) Related to Selected Variables

Table 57, like Table 32, indicates that numerical and total Wesman ability scores are positively associated with total preferences for manipulated job structural attributes. Table 58 presents the relationships between the Job Attitude Scale and preferences for task characteristics. As would be expected, those with the highest intrinsic orientation tended to express the greatest preference for learning new skills and the total of the four manipulated job attributes.

Table 55

Correlations of Work Itself/Work Environment Preference Questionnaire with Number of Jobs Completed

	Jobs Completed (Total)	Jobs Completed (Hour One)	Jobs Completed (Hour Two)	Jobs Completed (Hour Three)
Learning New Skills				
HJSA[a]	.37*	.50***	.37*+	.19
LJSA[a]	-.04	.09	-.10	-.09
Task Identity				
HJSA	.13	.25	.14	.01
LJSA	.40**	.35*	.32*	.39**
Responsibility				
HJSA	-.13	-.06	-.17	-.11
LJSA	.40**+	.34*	.40*≠	.38*+
External Feedback				
HJSA	.15	.07	.15	.17
LJSA	.03	-.06	.23	-.08
WI/WEP Total				
HJSA	.27	.37*	.26	.15
LJSA	.36*	.33*	.38**	.27

[a] $n = 45$ for both groups.

+Correlation coefficients significantly different from each other for the two tasks ($p < .05$).

≠Correlation coefficients significantly different from each other for the two tasks ($p < .01$).

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 56

Correlations of Work Itself/Work Environment Preference Questionnaire with Average Time Per Job

	Average Time Per Job (Total)	Average Time Per Job (Hour One)	Average Time Per Job (Hour Two)	Average Time Per Job (Hour Three)	Average Time Per Job (First 8 Jobs)
Learning New Skills					
HJSA[a]	-.36*+	-.33*	-.31*	-.33*≠	-.36*
LJSA[a]	.12	-.01	.06	.29	.02
Task Identity					
HJSA	-.19	-.33*	-.09	-.10	-.24
LJSA	-.45**	-.36*	-.38**	-.51***+	-.37*
Responsibility					
HJSA	.02	-.18	.17	.03	.02
LJSA	-.38**	-.45**	-.38**≠	-.23	-.43**+
External Feedback					
HJSA	-.18	-.15	-.13	-.19	-.09
LJSA	-.03	-.06	-.13	.09	-.07
WI/WEP Total					
HJSA	-.34*	-.44**	-.20	-.30*	-.32*
LJSA	-.34*	-.40**	-.39**	-.15	-.40**

[a] n = 45 for both groups.

+Correlation coefficients significantly different from each other for the two tasks ($p < .05$).

≠Correlation coefficients significantly different from each other for the two tasks ($p < .01$).

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 57

Correlations of Wesman Personnel Classification Test with Work Itself/Work Environment Preference Questionnaire

	Learning New Skills	Task Identity	Responsi-bility	External Feedback	WI/WEP Total
Verbal	.15	.12	.11	.10	.22*
Numerical	.20	.22*	.17	.03	.27**
Total	.20	.19	.16	.09	.28**

$n = 90$.

*$p < .05$.

**$p < .01$.

Table 58

Correlations of Job Attitude Scale with Work Itself/

Work Environment Preference Questionnaire

	Learning New Skills	Task Identity	Responsi-bility	External Feedback	WI/WEP Total
Extrinsic	-.36***	.02	.03	-.19	-.25*
Intrinsic	.36***	-.02	-.03	.19	.25*

$n = 90$.

*$p < .05$.

***$p < .001$.

Description of Job Structural Attributes (WI/WE) Related to Maintenance Task Outcomes

Tables 59 and 60 present the relationships among Work Itself/Work Environment descriptions of job structural attributes and measures of the amount of work completed by the research participants. Similar patterns of results are evident in both tables with participants who described the work as high in external feedback completing less work in both conditions. For the high treatment only, both tables indicate that those who perceive the task to be low in task identity and total manipulated job structural attributes tended to work most rapidly, producing the largest number of jobs completed.

Strong positive associations are evident in the low condition between external feedback and average time between jobs (Table 61). Consistently, those individuals who describe the job as high in external feedback (in this low treatment where feedback was not available) tended to spend more time not working between jobs.

While Table 59 through 61 have consistently indicated that participants who described the jobs as high in job structural attributes tended to produce less work, Tables 62 and 63 suggest that these same individuals experienced greater satisfaction and perceived the task to be more worthwhile, attractive, complex, difficult, arousing, and personally rewarding. The consistent pattern of positive relationships is evident in both conditions and across the complete range of affective response categories investigated.

Table 59

Correlations of Work Itself/Work Environment Description Questionnaire with Number of Jobs Completed

	Jobs Completed (Total)	Jobs Completed (Hour One)	Jobs Completed (Hour Two)	Jobs Completed (Hour Three)
Learning New Skills				
HJSA[a]	-.09	-.04	-.05	-.14
LJSA[a]	.11	.16	.04	.11
Task Identity				
HJSA	-.33*	-.33*	-.31*	-.25
LJSA	-.03	-.07	-.07	.04
Responsibility				
HJSA	-.06	-.10	-.05	-.03
LJSA	-.04	-.20	.06	.01
External Feedback				
HJSA	-.41**	-.31*	-.38**	-.40**
LJSA	-.39**	-.34*	-.43**	-.30*
WI/WEP Total				
HJSA	-.35*	-.31*	-.31*	-.33*
LJSA	-.08	-.18	-.07	.00

[a] $n = 45$ for both groups.

*$p < .05$.

**$p < .01$.

Table 60

Correlations of Work Itself/Work Environment Description Questionnaire with Average Time Per Job

	Average Time Per Job (Total)	Average Time Per Job (Hour One)	Average Time Per Job (Hour Two)	Average Time Per Job (Hour Three)	Average Time Per Job (First 8 Jobs)
Learning New Skills					
HJSA[a]	.10	.12	.07	.09	.05
LJSA[a]	-.10	-.10	-.08	-.11	-.09
Task Identity					
HJSA	.33*	.27	.29*	.32*	.35*
LJSA	-.06	.03	-.05	-.13	.01
Responsibility					
HJSA	.11	.08	.05	.19	.09
LJSA	.03	.15	.01	-.04	.10
External Feedback					
HJSA	.42**	.24	.49***	.37*	.42**
LJSA	.44**	.42**	.54***	.24	.46***
WI/WED Total					
HJSA	.38**	.28	.34*	.39**	.36*
LJSA	.05	.17	.06	-.07	.13

[a] $n = 45$ for both groups.

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 61

Correlations of Work Itself/Work Environment Description Questionnaire with Average Time Between Jobs

	Average Time Between Jobs (Total)	Average Time Between Jobs (Hour One)	Average Time Between Jobs (Hour Two)	Average Time Between Jobs (Hour Three)	Average Time Between Jobs (First 8 Jobs)
Learning New Skills					
HJSA[a]	-.16	-.08	-.21	-.16	-.11
LJSA[a]	.18	.15	.15	.17	.17
Task Identity					
HJSA	.07	.13	-.06	.06	.12
LJSA	-.15	-.03	-.12	-.21	-.07
Responsibility					
HJSA	-.17	.04	-.29*	-.18	-.02
LJSA	-.04	.03	-.06	-.08	.00
External Feedback					
HJSA	.07	.13	-.05	.05	.08
LJSA	.53***+	.62***≠	.57***≠	.27	.62***≠
WI/WED Total					
HJSA	-.10	.08	-.27	-.11	.02
LJSA	.06	.18	.07	-.04	.14

[a] $n = 45$ for both groups.

+Correlation coefficients significantly different from each other for the two tasks ($p < .05$).

≠Correlation coefficients significantly different from each other for the two tasks ($p < .01$).

***$p < .001$.

Table 62

Correlations of Work Itself/Work Environment Description Questionnaire with Satisfaction

	Work Satisfaction
Learning New Skills	
HJSA[a]	.57***
LJSA[a]	.22
Task Identity	
HJSA	.12
LJSA	.17
Responsibility	
HJSA	.09
LJSA	.14
External Feedback	
HJSA	.10
LJSA	.47**
WI/WED Total	
HJSA	.39**
LJSA	.34*

[a] $n = 45$ for both groups.

*$p < .05$.

**$p < .01$.

***$p < .001$.

Table 63

Correlations of Work Itself/Work Environment Description Questionnaire with Task Description Scales

	Intrinsic Job Worth	Task Attractiveness	General Affective Tone	General Arousal	Personal Competence	Job Complexity
Learning New Skills						
HJSA[a]	.24	.23	.01	-.05	-.05	.17
LJSA[a]	.11	.16	.06	.22	.18	.19
Task Identity						
HJSA	.33*	.33*	.30*	.27	.16	.26
LJSA	.32*	.35*	.37*	.16	.08	.30*
Responsibility						
HJSA	.44**	.38**	.34*	.32*	.30*	.22
LJSA	.16	.24	.14	.19	.03	.29*
External Feedback						
HJSA	.14	.06	-.05	-.20	.03	-.07
LJSA	.01	.10	.23	.03	-.10	.22
WI/WED Total						
HJSA	.50***	.44**	.27	.18	.19	.27
LJSA	.30*	.39**	.34*	.28	.10	.45**

[a] $n = 45$ for both groups.

*$p < .05$. **$p < .01$. ***$p < .001$.

Absolute Differences in Work Itself/Work Environment Job Structural Attribute Scores Related to Maintenance Task Outcomes

Presented in Tables 64 and 65 are the associations between absolute differences in Work Itself/Work Environment described minus preferred scores and the amount of work participants completed. As would be expected, results show a consistent pattern across these tables with high condition participants who express the largest absolute differences in external feedback and total score being those individuals who turned out the largest amount of work. A comparison of this data with information presented above in Tables 56 and 60 seems useful in clarifying these outcomes. These earlier results indicated that work speed was positively associated with preferences, but negatively related to descriptions of the job structural attributes available. From this pattern, and with the knowledge that differences in the current data typically result from preference scores exceeding task descriptions, it would be reasonable to expect work speed to increase as absolute differences increased due to preferences exceeding descriptions.

Table 66 shows data associating the Task Description Scale with absolute difference scores. Results indicate that individuals with the smallest learning new skills and total Work Itself/Work Environment difference scores tend to see both experimental tasks as more worthwhile, attractive, and complex. These same participants also tend to report experiencing a more positive affective response to the work.

Table 64

Correlations of Absolute Differences of Work Itself/Work Environment Questionnaire Job Structural Attributes Described (WIWED) Minus Work Itself/Work Environment Questionnaire Job Structural Attributes Preferred (WIWEP) Scores with Number of Jobs Completed

	Jobs Completed (Total)	Jobs Completed (Hour One)	Jobs Completed (Hour Two)	Jobs Completed (Hour Three)
Learning New Skills |WIWED-WIWEP|				
HJSA[a]	.16	.29*	.18	.01
LJSA[a]	-.16	-.07	-.14	-.19
Task Identity |WIWED-WIWEP|				
HJSA	.20	.19	.18	.18
LJSA	.35*	.34*	.31*	.29*
Responsibility |WIWED-WIWEP|				
HJSA	.00	.03	.02	-.05
LJSA	.16	.24	.11	.09
External Feedback |WIWED-WIWEP|				
HJSA	.39**	.27	.36*	.39**
LJSA	.17	.07	.36*	.04
Total |WIWED-WIWEP| |WIWED-WIWEP|				
HJSA	.44**	.42**	.44**	.34*
LJSA	.31*	.37*	.31*	.18

[a] $n = 45$ for both groups. *$p < .05$. **$p < .01$.

Table 65

Correlations of Absolute Differences of Work Itself/Work Environment Questionnaire Job Structural Attributes Described (WIWED) Minus Work Itself/Work Environment Questionnaire Job Structural Attributes Preferred (WIWEP) Scores With Average Time Per Job

	Average Time Per Job (Total)	Average Time Per Job (Hour One)	Average Time Per Job (Hour Two)	Average Time Per Job (Hour Three)	Average Time Per Job (First 8 Jobs)
Learning New Skills |WIWED-WIWEP|					
HJSA[a]	-.20	-.18	-.25	-.13	-.24
LJSA[a]	.20	.08	.13	.37*+	.11
Task Identity |WIWED-WIWEP|					
HJSA	-.13	.01	-.22	-.14	-.15
LJSA	-.32*	-.31*	-.27	-.31*	-.30*
Responsibility |WIWED-WIWEP|					
HJSA	.02	.13	-.07	-.01	.00
LJSA	-.16	-.26	-.20	-.01	-.25
External Feedback |WIWED-WIWEP|					
HJSA	-.41**	-.27	-.42**	-.40**+	-.35*
LJSA	-.19	-.21	-.31*	-.01	-.23

Table 65 (cont'd.)

	Average Time Per Job (Total)	Average Time Per Job (Hour One)	Average Time Per Job (Hour Two)	Average Time Per Job (Hour Three)	Average Time Per Job (First 8 Jobs)
Total WIWED-WIWEP |WIWED-WIWEP|					
HJSA	-.47***	-.33*	-.49***	-.45***+	-.46**
LJSA	-.27	-.41**	-.31*	-.05	-.37*

[a] n = 45 for both groups.

+Correlation coefficients significantly different from each other for the two tasks ($p < .05$).

*$p < .05$.

**$p < .01$.

***$p < .001$.

Table 66

Correlations of Absolute Differences of Work Itself/Work Environment Questionnaire Job Structural Attributes Described (WIWED) Minus Work Itself/Work Environment Questionnaire Job Structural Attributes Preferred (WIWEP) Scores with Task Description Scale

	Intrinsic Job Worth	Task Attractiveness	General Affective Tone	General Arousal	Personal Competence	Job Complexity
Learning New Skills |WIWED-WIWEP|						
HJSA[a]	-.37*	-.37*	-.40**	-.33*	-.23	-.30*
LJSA[a]	-.24	-.31*	-.29*	-.23	-.38**	-.34*
Task Identity |WIWED-WIWEP|						
HJSA	-.20	-.19	-.12	-.30*	-.25	-.15
LJSA	-.18	-.20	-.03	-.08	-.03	-.18
Responsibility |WIWED-WIWEP|						
HJSA	-.33*	-.25	-.21	-.24	-.38**	-.09
LJSA	-.13	-.12	-.02	-.11	-.07	-.09
External Feedback |WIWED-WIWEP|						
HJSA	-.26	-.25	-.15	-.09	-.11	-.18
LJSA	.09	.07	-.16	.01	.03	.03
Total WIWED-WIWEP |WIWED-WIWEP|						
HJSA	-.54***	-.54***	-.47***	-.26	-.19	-.42**
LJSA	-.25	-.32*	-.31*	-.24	-.12	-.36*

[a] $n = 45$ for both groups. *$p < .05$. **$p < .01$. ***$p < .001$.

Absolute Differences in Work Itself/Work Environment Job Structural Attribute Scores Related to Selected Variables

Tables 67 through 69 indicate that work value orientations tended to be related to external feedback absolute difference scores. In the high condition, those participants with high intrinsic orientation scores and those individuals indicating a positive adherence to the Protestant Ethic both reported larger described minus preferred external feedback absolute difference scores. It is interesting to note, however, that these associations did not exist in the low condition where no external feedback was given. In two of the three tables, these differences across conditions reached significance. These high condition results seem consistent with data reported earlier in Tables 53 and 54 indicating that individuals with intrinsically oriented work values tended to prefer greater levels of external feedback. These higher preferences could, therefore, be expected to lead to larger absolute differences between preferences and task descriptions.

Relationships Between Ability and Performance as Mediated by Work Satisfaction

Carlson, Dawis, and Weiss (1969) presented evidence indicating that satisfaction levels mediate the relationships between ability and performance measures. Recent data presented by Barrett, O'Connor, Alexander, Forbes, and Balascoe (1975) provided strong support for Carlson, Dawis, and Weiss' (1969) position that stronger ability-performance correlations will exist when satisfaction is high.

Tables 70 and 71 show the mediated associations between errors correctly detected and both Wesman general ability and

Table 67

Correlations of Survey of Work Values with Absolute Differences of Work Itself/Work Environment Questionnaire Job Structural Attributes Described (WIWED) Minus Work Itself/Work Environment Questionnaire Job Structural Attributes Preferred (WIWEP) Scores

	Learning New Skills |WIWED-WIWEP|	Task Identity |WIWED-WIWEP|	Responsibility |WIWED-WIWEP|	External Feedback |WIWED-WIWEP|	Total WIWED Minus WIWEP |WIWED-WIWEP|
Earnings					
HJSA[a]	-.12	.32*	.04	.12	-.01
LJSA[a]	-.21	-.04	.09	.09	-.07
Social Status					
HJSA	-.02	.13	-.14	.30*+	.03
LJSA	-.32*	-.03	-.02	-.24	-.25
Upward Striving					
HJSA	-.27	.15	.25	.21	-.01
LJSA	.02	.28	-.12	.15	.09
Activity Preference					
HJSA	-.20	-.16	-.18	.42**+	-.13
LJSA	-.03	.25	-.03	.02	.16
Job Involvement					
HJSA	-.24	.07	.09	.33*	-.04
LJSA	-.19	.14	-.16	.06	.04

Table 67 (cont'd.)

	Learning New Skills |WIWED-WIWEP|	Task Identity |WIWED-WIWEP|	Responsibility |WIWED-WIWEP|	External Feedback |WIWED-WIWEP|	Total WIWED Minus WIWEP |WIWED-WIWEP|
Pride in Work					
HJSA	-.42**	-.22	-.01	.35*+	-.19
LJSA	-.14	.24	-.16	-.11	-.05
Intrinsic					
HJSA	-.34*	-.13	-.05	.44**+	-.14
LJSA	-.15	.27	-.15	-.01	.07
Extrinsic					
HJSA	-.09	.29	-.05	.24	.01
LJSA	-.32*	-.04	.04	-.09	-.19

[a] $n = 45$ for both groups.

+Correlation coefficients significantly different from each other for the two tasks ($p < .05$).

*$p < .05$.

**$p < .01$.

Table 68

Correlations of Job Attitude Survey with Absolute Differences of Work Itself/Work Environment Questionnaire Job Structural Attributes Described (WIWED) Minus Work Itself/Work Environment Questionnaire Job Structural Attributes Preferred (WIWEP) Scores

	Learning New Skills |WIWED-WIWEP|	Task Identity |WIWED-WIWEP|	Responsibility |WIWED-WIWEP|	External Feedback |WIWED-WIWEP|	Total WIWED Minus WIWEP |WIWED-WIWEP|
Extrinsic					
HJSA[a]	-.23	-.12	-.17	-.32*	-.33*
LJSA[a]	-.45**	-.09	.10	-.14	-.16
Intrinsic					
HJSA	.23	.12	.17	.32*	.33*
LJSA	.45**	.09	-.10	.14	.16

[a] n = 45 for both groups.

*$p < .05$.

**$p < .01$.

Table 69

Correlations of Protestant Ethic Scale with Absolute Differences of Work Itself/Work Environment Questionnaire Job Structural Attributes Described (WIWED) Minus Work Itself/Work Environment Questionnaire Job Structural Attributes Preferred (WIWEP) Scores

	Learning New Skills |WIWED-WIWEP|	Task Identity |WIWED-WIWEP|	Responsibility |WIWED-WIWEP|	External Feedback |WIWED-WIWEP|	Total WIWED Minus WIWEP |WIWED-WIWEP|
Pro-Protestant Ethic					
HJSA[a]	-.19	-.01	-.08	.42**#	.00
LJSA[a]	-.16	.22	-.09	-.18	-.03
Non-Protestant Ethic					
HJSA	.09	.12	.30*	-.30*	.01
LJSA	.01	.20	.05	.36*#	.26

[a] n = 45 for both groups.

#Correlation coefficients significantly different from each other for the two tasks ($p < .001$).

*$p < .05$.

**$p < .01$.

Table 70

Correlations of Wesman Personnel Classification Test with Errors Correctly Identified as Mediated by Work Satisfaction

	Errors Correctly Identified (Total)	Errors Correctly Identified (Hour One)	Errors Correctly Identified (Hour Two)	Errors Correctly Identified (Hour Three)	Errors Correctly Identified (First 8 Jo
HJSA					
Wesman Verbal					
High Satisfaction[a]	.30	.20	.16	.01	.40*+
Low Satisfaction[b]	-.38	-.20	-.01	-.22	-.38
Wesman Numerical					
High Satisfaction	.34	.41*+	.31	-.13	.57**≠
Low Satisfaction	.01	-.30	.12	.30	-.41*
Wesman Total					
High Satisfaction	.34	.32	.24	-.05	.51*≠
Low Satisfaction	-.27	-.30	.06	.00	-.48*
LJSA					
Wesman Verbal					
High Satisfaction[a]	-.15	.37	-.20	-.10	-.05
Low Satisfaction[b]	-.12	-.16	-.05	-.05	-.21
Wesman Numerical					
High Satisfaction	.37	.44*	.25	.28	.27
Low Satisfaction	.37	.45*	.31	.41*	.44*
Wesman Total					
High Satisfaction	.09	.48*	.00	.08	.11
Low Satisfaction	.06	.06	.09	.13	.02

[a] $n = 22$. [b] $n = 23$. *$p < .05$. **$p < .01$.

+Correlation coefficients significantly different from each other for the two satisfaction levels ($p < .05$).

≠Correlation coefficients significantly different from each other for the two satisfaction levels ($p < .01$).

Table 71

Correlations of Cognitive Style Measures with Errors Correctly Identified as Mediated by Work Satisfaction

	Errors Correctly Identified (Total)	Errors Correctly Identified (Hour One)	Errors Correctly Identified (Hour Two)	Errors Correctly Identified (Hour Three)	Errors Correctly Identified (First 8 Jobs)
HJSA					
RFT					
High Satisfaction[a]	-.37	-.51*≠	-.04	.08	-.61*
Low Satisfaction[b]	.21	.29	.02	.37	-.13
GEFT Raw Scores					
High Satisfaction	.36*	.63**+	.07	.01	.40*
Low Satisfaction	-.22	.06	.04	-.27	-.09
GEFT Inverse Scores					
High Satisfaction	-.47*	-.71***+	-.19	.02	-.61*+
Low Satisfaction	.21	-.15	-.05	.26	.02
LJSA					
RFT					
High Satisfaction[a]	-.14	.13	-.00	-.15	-.09
Low Satisfaction[b]	.21	.16	.08	.21	.19
GEFT Raw Scores					
High Satisfaction	.38	.39	.29	.21	.45*
Low Satisfaction	-.17	-.01	-.05	-.17	-.16
GEFT Inverse Scores					
High Satisfaction	-.60*≠	-.27	-.64***+	-.28	-.73***#
Low Satisfaction	.18	.06	.02	.20	.20

[a] $n = 22$. [b] $n = 23$. *$p < .05$. **$p < .01$. ***$p < .001$.

+Correlation coefficients significantly different from each other for the two satisfaction levels ($p < .05$).

≠Correlation coefficients significantly different from each other for the two satisfaction levels ($p < .01$).

#Correlation coefficients significantly different from each other for the two satisfaction levels ($p < .001$).

Cognitive Style Test scores. As predicted by Carlson, Dawis, and Weiss' (1969) position, stronger relationships typically occurred among the high satisfaction participants. It should also be noted that in both of these tables, each time a significant difference in correlations is evident across the high and low satisfaction groups, the stronger correlation exists in the high satisfaction group. This pattern of outcomes is most evident when Group Embedded Figures Test scores are related to the quality variables in the low condition (Table 71).

Relationship Between Ability and Performance as Mediated by Preferences for Job Structural Attributes (APS)

Table 72 presents the relationships between Wesman mental ability scores and the number of jobs participants completed as mediated by preferences for job structural attributes. While no pattern of relationships is apparent in the low treatment, low preference individuals consistently display stronger performance to ability associations in the high condition.

Similar patterns of relationships are evident in Tables 73 through 75 with no significant differences across preference groups in the low condition and high condition, low preference participants consistently showing stronger relationships than their high preference, high condition counterparts. For example, when Wesman ability scores are related to average time per job in the high condition in Table 73, those participants with low preferences for job structural attributes tended to display consistently strong associations with higher ability people working most rapidly.

When cognitive style measures are related to work rate in Tables 74 and 75, similar results are evident. High condition,

Table 72

Correlations of Wesman Personnel Classification Test with Number of Jobs Completed as Mediated by Attribute Preference Scale Job Structural Attributes Preferred Scores (APS)

	Jobs Completed (Total)	Jobs Completed (Hour One)	Jobs Completed (Hour Two)	Jobs Completed (Hour Three)
HJSA				
Wesman Verbal				
High APS[a]	.11	.09	.05	.16
Low APS[b]	.51*	.51*	.38	.50*
Wesman Numerical				
High APS	.05	-.03	-.01	.12
Low APS	.65***+	.65***+	.57**+	.56**
Wesman Total				
High APS	.10	.05	.03	.17
Low APS	.64***+	.63**+	.51*	.58**
LJSA				
Wesman Verbal				
High APS[c]	.12	.18	.09	.02
Low APS[d]	.23	.30	.33	.08
Wesman Numerical				
High APS	.42*	.33	.23	.48*
Low APS	.35	.43	.25	.33
Wesman Total				
High APS	.27	.28	.17	.22
Low APS	.34	.44*	.36	.23

[a] $n = 23$. [b] $n = 22$. [c] $n = 24$. [d] $n = 21$.

+Correlation coefficients significantly different from each other for the two preference levels ($p < .05$).

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 73

Correlations of Wesman Personnel Classification Test with Average Time Per Job as Mediated by Attribute Preference Scale Job Structural Attributes Preferred Scores (APS)

	Average Time Per Job (Total)	Average Time Per Job (Hour One)	Average Time Per Job (Hour Two)	Average Time Per Job (Hour Three)	Average Time Per Job (First 8 Jobs)
HJSA					
Wesman Verbal					
High APS[a]	-.07	.02	.08	-.24	.06
Low APS[b]	-.55**	-.57**+	-.38	-.46*	-.57**+
Wesman Numerical					
High APS	-.05	-.06	.03	-.10	.06
Low APS	-.66***+	-.59**	-.51*	-.63**	-.66***+
Wesman Total					
High APS	-.07	-.01	.07	-.21	.07
Low APS	-.66***+	-.64***+	-.49*	-.59**	-.68***≠
LJSA					
Wesman Verbal					
High APS[c]	-.05	-.13	.01	.01	-.10
Low APS[d]	-.24	-.37	-.29	-.05	-.33
Wesman Numerical					
High APS	-.43*	-.38	-.37	-.44*	-.37
Low APS	-.27	-.30	-.08	-.38	-.22
Wesman Total					
High APS	-.22	-.26	-.15	-.18	-.23
Low APS	-.31	-.42*	-.25	-.22	-.35

[a] $\underline{n} = 23$. [b] $\underline{n} = 22$. [c] $\underline{n} = 24$. [d] $\underline{n} = 21$.

+Correlation coefficients significantly different from each other for the two preference levels ($p < .05$).

≠Correlation coefficients significantly different from each other for the two preference levels ($p < .01$).

Table 74

Correlations of Cognitive Style Measures with Number of Jobs Completed as Mediated by Attribute Preference Scale Job Structural Attributes Preferred Scores (APS)

	Jobs Completed (Total)	Jobs Completed (Hour One)	Jobs Completed (Hour Two)	Jobs Completed (Hour Three)
HJSA				
RFT				
High APS[a]	.01	.08	.01	-.04
Low APS[b]	-.47*	-.51*	-.37	-.38
GEFT Raw Scores				
High APS	.28	.18	.24	.31
Low APS	.59**	.55**	.48*	.57**
GEFT Inverse Scores				
High APS	-.18	-.13	-.17	-.19
Low APS	-.59**	-.62**	-.42	-.56**
LJSA				
RFT				
High APS[c]	-.18	-.09	-.22	-.14
Low APS[d]	.01	-.01	-.08	.09
GEFT Raw Scores				
High APS	.44*	.40	.51*	.22
Low APS	.39	.50*	.23	.39
GEFT Inverse Scores				
High APS	-.30	-.31	-.34	-.12
Low APS	-.30	-.44*	-.13	-.31

[a] $n = 23$. [b] $n = 22$. [c] $n = 24$. [d] $n = 21$.

*$p < .05$. **$p < .01$.

Table 75

Correlations of Cognitive Style Measures with Average Time Per Job as Mediated by Attribute Preference Scale Job Structural Attributes Preferred Scores (APS)

	Average Time Per Job (Total)	Average Time Per Job (Hour One)	Average Time Per Job (Hour Two)	Average Time Per Job (Hour Three)	Average Time Per Job (First 8 Jobs)
HJSA					
RFT					
High APS[a]	.02	.03	.04	-.03	.02
Low APS[b]	.65***+	.82***#	.28	.57**+	.64***+
GEFT Raw Scores					
High APS	-.28	-.30	-.15	-.29	-.22
Low APS	-.62**	-.53**	-.48*	-.65***	-.60**
GEFT Inverse Scores					
High APS	.20	.27	.12	.15	.18
Low APS	.70***+	.75***+	.36	.73***+	.66***
LJSA					
RFT					
High APS[c]	.16	.21	.13	.11	.15
Low APS[d]	-.09	.00	-.08	-.15	-.05
GEFT Raw Scores					
High APS	-.36	-.44*	-.29	-.31	-.40
Low APS	-.30	-.21	-.32	-.23	-.29
GEFT Inverse Scores					
High APS	.25	.35	.17	.21	.30
Low APS	.19	.07	.19	.20	.16

[a] $n = 23$. [b] $n = 22$. [c] $n = 24$. [d] $n = 21$.

+Correlation coefficients significantly different from each other for the two preference levels ($p < .05$).

#Correlation coefficients significantly different from each other for the two preference levels ($p < .001$).

*$p < .05$. **$p < .01$. ***$p < .001$.

low preference individuals consistently display the strongest set of associations with field independent individuals working most rapidly.

These results from Tables 72 through 75 seem to add further confirmation to Carlson, Dawis, and Weiss' (1969) position that the relationship between abilities and performance will be higher for satisfied versus dissatisfied individuals. The rational underlying this interpretation rests on data presented in Tables 29 through 31. Specifically, it should be noted in Table 31 that the most satisfied participants were those high condition individuals expressing the lowest preferences for the manipulated job structural attributes. This, of course, is the same group who displays the strongest ability to performance relationships in Tables 72 through 75.

Relationships Between Ability and Performance as Mediated by Preferences for Job Structural Attributes (WI/WE)

Mediating ability to performance relationships with Work Itself/Work Environment Preference Scores produced a pattern of results similar to those presented above in Tables 72 through 75, where Attribute Preference Scale scores were employed. In both Tables 76 and 77, preferences appear to have no significant impact on ability to performance relationships in the low condition. When high condition data is considered, however, those with low preferences for job structural attributes consistently display the strongest positive correlations between Wesman ability measures and work output. As discussed above, these findings appear consistent with the Carlson, Dawis, and Weiss (1969) position since these low preference, high condition participants have been shown to

Table 76

Correlations of Wesman Personnel Classification Test with Number of Jobs Completed as Mediated by Work Itself/Work Environment Preference Questionnaire

	Number of Jobs Completed (Total)	Number of Jobs Completed (Hour One)	Number of Jobs Completed (Hour Two)	Number of Jobs Completed (Hour Three)
HJSA				
Wesman Verbal				
High WI/WEP[a]	.13	.10	.11	.14
Low WI/WEP[b]	.52**	.54**	.36	.50*
Wesman Numerical				
High WI/WEP	.07	.00	.03	.14
Low WI/WEP	.62**+	.62**+	.53**	.53**
Wesman Total				
High WI/WEP	.12	.07	.09	.16
Low WI/WEP	.62**	.63***+	.47*	.56**
LJSA				
Wesman Verbal				
High WI/WEP[a]	-.03	.06	.11	-.19
Low WI/WEP[b]	.36	.40	.31	.28
Wesman Numerical				
High WI/WEP	.47*	.35	.42*	.48*
Low WI/WEP	.36	.46*	.14	.38
Wesman Total				
High WI/WEP	.24	.24	.32	.11
Low WI/WEP	.42*	.49*	.28	.37

[a] $\underline{n} = 22$. [b] $\underline{n} = 23$.

+Correlation coefficients significantly different from each other for the two preference levels ($\underline{p} < .05$).

*$\underline{p} < .05$. **$\underline{p} < .01$. ***$\underline{p} < .001$.

Table 77

Correlations of Wesman Personnel Classification Test with Average Time Per Job as Mediated by Work Itself/Work Environment Preference Questionnaire

	Average Time Per Job (Total)	Average Time Per Job (Hour One)	Average Time Per Job (Hour Two)	Average Time Per Job (Hour Three)	Average Time Per Job (First 8 Jobs)
HJSA					
Wesman Verbal					
High WI/WEP[a]	-.07	.01	-.02	-.13	-.01
Low WI/WEP[b]	-.62**+	-.61**+	-.31	-.61**	-.56**
Wesman Numerical					
High WI/WEP	-.12	-.08	-.09	-.18	-.10
Low WI/WEP	-.63***	-.57**	-.40	-.61**	-.54**
Wesman Total					
High WI/WEP	-.10	-.03	-.06	-.17	-.05
Low WI/WEP	-.68***+	-.65***+	-.38	-.66***	-.60**+
LJSA					
Wesman Verbal					
High WI/WEP[a]	.17	-.01	.17	.24	.04
Low WI/WEP[b]	-.39	-.42*	-.36	-.30	-.40
Wesman Numerical					
High WI/WEP	-.54**	-.41	-.48*	-.55**	-.37
Low WI/WEP	-.26	-.33	-.08	-.37	-.28
Wesman Total					
High WI/WEP	-.16	-.24	-.12	-.11	-.19
Low WI/WEP	-.39	-.45*	-.29	-.38	-.41

[a] $n = 22$. [b] $n = 23$.

+Correlation coefficients significantly different from each other for the two preference levels ($p < .05$).

*$p < .05$. **$p < .01$. ***$p < .001$.

be significantly more satisfied than their high preference counterparts.

Relationships Between Abilities and Performance as Mediated by Pride in Work

In Tables 78 through 80, the pride in work scale from the Survey of Work Values was employed to mediate the relationships between ability and performance measures. Table 78 seems to exemplify the interesting pattern of relationships apparent throughout this data. In the high condition, those individuals low on the pride in work scale consistently display stronger positive relationships between Wesman mental ability and the number of jobs completed. Frequently, the differences in correlation coefficients across conditions reached significance. While no significant differences across conditions were detected in the low treatment, a pattern of results seems to exist with stronger associations produced by individuals high on the pride in work scale.

Similar results are evident in Table 79 when Wesman ability scores are related to average time per job. High condition, low pride in work participants again showed significantly stronger relationships than their high pride counterparts. While no associations appeared to exist between ability and work pace for high pride, high condition participants, reversed results again seem to be true for the low condition. In this treatment, high pride individuals showed a pattern of negative correlations between ability and average time per job, indicating that those with higher Wesman scores worked most rapidly.

Table 80 relates cognitive style scores to a measure of work speed. As in Tables 78 and 79, it appears that those high

Table 78

Correlations of Wesman Personnel Classification Test with Number of Jobs Completed as Mediated by Pride in Work

	Jobs Completed (Total)	Jobs Completed (Hour One)	Jobs Completed (Hour Two)	Jobs Completed (Hour Three)
HJSA				
Verbal				
High Pride[a]	.07	.17	.03	.03
Low Pride[b]	.52**	.49*	.43*	.49*
Numerical				
High Pride	-.08	-.12	-.04	-.07
Low Pride	.68***≠	.69***≠	.60**+	.58**+
Total				
High Pride	.01	.07	.01	-.01
Low Pride	.65***+	.64***+	.56**	.57**+
LJSA				
Verbal				
High Pride[c]	.44*	.42*	.40	.35
Low Pride[d]	-.06	.03	.03	-.17
Numerical				
High Pride	.67***	.64***	.47*	.65***
Low Pride	.18	.14	.08	.25
Total				
High Pride	.60**	.57**	.48*	.53*
Low Pride	.05	.10	.07	-.01

[a] $n = 21$. [b] $n = 24$. [c] $n = 22$. [d] $n = 23$.

+Correlation coefficients significantly different from each other for the two pride levels ($p < .05$).

≠Correlation coefficients significantly different from each other for the two pride levels ($p < .01$).

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 79

Correlations of Wesman Personnel Classification Test with Average Time Per Job as Mediated by Pride in Work

	Average Time Per Job (Total)	Average Time Per Job (Hour One)	Average Time Per Job (Hour Two)	Average Time Per Job (Hour Three)	Average Time Per Job (First 8 Jobs)
HJSA					
Verbal					
High Pride[a]	-.03	.09	.09	-.21	.06
Low Pride[b]	-.56**	-.60**+	-.39	-.47*	-.56**+
Numerical					
High Pride	.08	.14	.14	-.06	.19
Low Pride	-.67***≠	-.64***≠	-.57**+	-.56**	-.69***≠
Total					
High Pride	.01	.13	.13	-.17	.13
Low Pride	-.67***+	-.68***≠	-.52**+	-.56**	-.68***≠
LJSA					
Verbal					
High Pride[c]	-.46*	-.51*	-.39	-.42*+	-.49*
Low Pride[d]	.10	-.02	-.03	.31	.01
Numerical					
High Pride	-.64***	-.61**	-.52*	-.66***	-.60**
Low Pride	-.14	-.13	.00	-.26	-.07
Total					
High Pride	-.60**+	-.62**	-.50*	-.59**+	-.61**+
Low Pride	.01	-.09	-.03	.12	-.03

[a] $n = 21$. [b] $n = 24$. [c] $n = 23$. [d] $n = 22$.

+Correlation coefficients significantly different from each other for the two pride levels ($p < .05$).

≠Correlation coefficients significantly different from each other for the two pride levels ($p < .01$).

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 80

Correlations of Cognitive Style Measures with Average Time Per Job as Mediated by Pride in Work

	Average Time Per Job (Total)	Average Time Per Job (Hour One)	Average Time Per Job (Hour Two)	Average Time Per Job (Hour Three)	Average Time Per Job (First 8 Jobs)
HJSA					
RFT					
High Pride[a]	.11	.12	.10	.06	.09
Low Pride[b]	.63***+	.85***#	.25	.53**	.61**
GEFT Raw Scores					
High Pride	-.15	-.24	-.07	-.09	-.18
Low Pride	-.68***+	-.56**	-.55**	-.71***+	-.60**
GEFT Inverse Scores					
High Pride	.17	.31	.11	.07	.22
Low Pride	.69***+	.75***+	.36	.70***+	.63***
LJSA					
RFT					
High Pride[c]	-.17	-.04	-.17	-.26	-.16
Low Pride[d]	.12	.19	.07	.06	.15
GEFT Raw Scores					
High Pride	-.10	-.12	-.07	-.06	-.12
Low Pride	-.38	-.40	-.34	-.28	-.41
GEFT Inverse Scores					
High Pride	.04	.05	.00	.02	.07
Low Pride	.19	.26	.12	.14	.22

[a] $n = 21$. [b] $n = 24$. [c] $n = 22$. [d] $n = 23$.

+Correlation coefficients significantly different from each other for the two pride levels ($p < .05$).

#Correlation coefficients significantly different from each other for the two pride levels ($p < .001$).

**$p < .05$. ***$p < .001$.

condition participants with low Survey of Work Values pride in work scores produce the strongest ability to performance relationships with field independent individuals working most rapidly. No consistent pattern of relationships appears to exist for low condition participants.

Discussion

Results indicate that neither quantity or quality varied across conditions. Learning new skills, task identity, responsibility, and external feedback were successfully manipulated according to both the Attribute Description Scale and Work Itself/Work Environment Description Questionnaire responses. Several other task descriptive measures exhibited significant differences across treatment conditions in the expected directions. Specifically, the high condition task was described as more satisfying, worthwhile, attractive, and complex. Furthermore, it was reported that this task required greater personal competence and induced both higher general arousal and a more positive affective tone within the research participants. It is interesting to note that despite successful structural attribute manipulations and induced differences in task perceptions, no significant variations in performance occurred across treatments. This data provides an indication of the lack of association among measures of both affect and arousal and job performance.

Both general and specific abilities were found to relate to performance and satisfaction on the experimental tasks. Higher ability participants tended to produce greater quantity and quality, but be less satisfied in the high condition. While field independent individuals and those scoring higher on the Wesman test of mental ability tended to work more rapidly and

produce better quality, these same individual differences were negatively associated with satisfaction. While the ability to performance relationships seem straight forward, alternative explanations appear to exist for the satisfaction prediction. It might be postulated, for example, that individuals lower in Wesman mental ability were easier to fool with the psychological manipulation, and therefore, believing the task to be enlarged, were more satisfied. In contrast, those with higher mental ability may have been more sensitive to the divergence between the physical characteristics of the task and the expectations created by the psychological manipulation, and therefore were more dissatisfied. Along similar lines, it could be argued that those with higher general mental abilities were more used to demanding, challenging, and complex tasks in their daily lives and were, therefore, less satisfied with the experimental tasks as a result of a contrast effect. Yet a third explanation might be posited based on evidence that field dependent individuals are more susceptible to persuasion and cues in their social environment than their field independent counterparts (Silverman, 1970). Given this greater susceptibility, it would seem reasonable to argue that these individuals tended to be more easily convinced by the high job structural attribute psychological manipulation and, therefore, were more satisfied with the experimental task.

Attribute Preference Scale preferences for job structural attributes also tended to display an interesting pattern of relationships when associated with both performance and satisfaction. Individuals expressing the highest levels of preferences for the manipulated task characteristics tended to work most rapidly and produce the highest quality in both experimental treatments. In

contrast, however, a strong negative relationship was evident between preferences and work satisfaction in the high condition. As discussed in the results section, it appears that this negative correlation between preferences and satisfaction occurs due to the fact that, for high condition participants, the best match between preferences and descriptions of job attributes takes place at the low end of the preference distribution. Explanations for the positive preference to performance associations are somewhat less clear. Information presented in Tables 32 and 33 offer one plausable rationale. Consistent with earlier data reported by Barrett, O'Connor, Alexander, Forbes, and Balascoe (1975), these tables indicate that individuals expressing the highest preferences for the manipulated attributes tend to be the same participants with the highest levels of those general and specific abilities predictive of high performance. It may be then that it is these abilities within the individuals, rather than their preferences, which are causally responsible for their higher levels of task performance. Further investigation and analyses will be necessary in order to evaluate the merits of this posited explanation. Supportive findings, however, would substantially simplify the selection strategy appropriate to optimizing the combination of performance and satisfaction, especially within the high condition. Clearly, the appropriate selection model would then involve hiring those individuals high in both Wesman mental ability and field independence, but low in preferences for job structural attributes, in order to optimize performance and satisfaction in the high treatment condition.

Conceptually, it seems reasonable to expect the intrinsic scales of the Survey of Work Values and the Pro-Protestant Ethic

Scale to demonstrate similar predictive relationships when associated with other variables. This expected pattern of common variance appears to be evident in a comparison of Tables 34 and 35 and 41 with 42. In the first set of tables, all of the Survey of Work Values intrinsic subscales and their total, as well as the Pro-Protestant Ethic measure, display strong positive associations with preference for responsibility. Similarly, in Tables 41 and 42, both the intrinsic Survey of Work Value scales and the Pro-Protestant Ethic Scale relate positively to participants' descriptions of the opportunities to learn new skills within their experimental tasks.

Descriptions of the experimental tasks were also related to job outcomes. Those who described the tasks as higher in job structural attributes tended to work more slowly and take more time between jobs, but expressed higher levels of satisfaction with their jobs. This pattern of satisfaction outcomes is similar to data presented previously by Barrett, O'Connor, Alexander, Forbes, and Balascoe (1975). Further similarities can be noted between the current data and these 1975 results when one examines the relationships among ability measures and task descriptions. In both sets of data, those participants high in general and special mental abilities tended to describe their tasks as lower in job structural attributes, particularly learning new skills. It seems evident that individual differences interacted with objective task characteristics and psychologically manipulated job structural attributes in affecting the way participants experienced and described the experimental treatments they were exposed to.

In the data reported above, two separate instruments (Attribute Preference Scale and Work Itself/Work Environment Preference Questionnaire) were employed to assess participants' preferences for job structural attributes. It is encouraging to note that, despite the divergent methodologies employed, several common patterns are evident in the way these two preference measures relate to task outcomes and selected individual differences. For example, those individuals expressing higher total preferences for job structural attributes tended to work most rapidly in both conditions. These relationships were evident for both the Attribute Preference Scale and the Work Itself/Work Environment Preference Questionnaire. Selected individual difference scores, such as higher Wesman numerical and total mental abilities, also tended to show a consistent pattern of positive associations across both preference instruments.

A similar pattern of consistent outcomes can be noted when the two task description measures, the Attribute Description Scale and the Work Itself/Work Environment Description Questionnaire, are related to task outcomes. Results are also similar to those reported earlier by Barrett, O'Connor, Alexander, Forbes, and Balascoe (1975). Total described attribute scores, for example, display consistent positive associations with work satisfaction. Participants who describe their jobs as higher in these task characteristics consistently tend to express a higher level of satisfaction with their work. These relationships are not surprising, however, in that all three measures involved (Attribute Description Scale, Work Itself/Work Environment Description Questionnaire, and the Job Descriptive Index) simply provide a

variety of methods and dimensions along which tasks can be described. It is interesting, however, to note that the relationships among these measures, while significant, are low enough to indicate that each of the measures is tapping a separate segment of descriptive variance and, therefore, not merely providing repetitive indices of job satisfaction.

Attribute Description Scale and Work Itself/Work Environment Description Questionnaire measures also displayed consistent relations to task performance, as well as to job satisfaction. For example, described feedback to work pace outcomes were similar across these two measures and also consistent with earlier data reported by Barrett, O'Connor, Alexander, Forbes, and Balascoe (1975). Low condition participants who described the task as high in external feedback tended to work at the slowest pace. It should be noted that no external feedback was either promised or presented in this low condition. This may indicate that participants reporting that the task was high in external feedback had a poor understanding of the job which resulted in their poorer performance.

A few notable exceptions are evident in the current data when comparisons are made of relations between the two description minus preference measures and both task outcome variables and individual differences. For example, in Table 46, a significant negative relationship exists in the high condition between absolute differences in described minus preferred Attribute Preference Scale/Attribute Description Scale external feedback scores and adherence to the Protestant Ethic. In contrast, when Work Itself/Work Environment external feedback absolute difference

scores are employed in Table 69, this same relationship with the Pro-Protestant Ethic Scale is significant and positive. Such major reversals are difficult to understand. Clearly, they indicate a differential sensitivity across the two task preference and description instruments and suggest a need for the further construct validation work currently underway regarding these different preference and description instruments. Results from these analyses will be presented in a future technical report.

Data supporting Carlson, Dawis, and Weiss' (1969) theory that ability to performance correlations are mediated by levels of work satisfaction was presented recently by Barrett, O'Connor, Alexander Forbes, and Balascoe (1975). While direct evidence supporting this theory that ability to performance relationships are stronger for those experiencing higher work satisfaction has been presented again in the current data, these results are not typically as strong or consistent as the patterns evident in earlier research. An interesting set of related evidence is, however, apparent within the current data. Specifically, those high condition participants expressing low preferences for job structural attributes (that group of individuals shown in Table 31 to be most satisfied) consistently demonstrated stronger associations between performance and both general and specific abilities.

A further effort was made to understand the relationships between abilities and performance by examining the effects of differing levels of pride in work upon these associations. Analyses involved employing this intrinsic scale from the Survey of Work Values to mediate the relations between ability and performance measures. This strategy was followed based on the assumption

that high pride in work and abilities may be compensatory in terms of their contributions to task performance. It was, therefore, hypothesized that ability to performance relationships would not be as strong for high pride in work individuals since their intrinsic values would also be contributing to the level of performance success. High job structural attribute condition results presented in Tables 78 through 80 consistently provide strong positive evidence supporting this hypothesis. Consistently, those with low pride in work scores demonstrate stronger associations between abilities and performance than do their high pride in work counterparts. These outcomes, therefore, appear compatable with the expectation that the presence of pride in work can compensate for a lack of ability and, therefore, reduce ability to performance correlations.

Results for the low job structural attribute condition appear to provide an interesting reversal of those hypothesized outcomes observed for high condition participants. While few of the across condition differences in correlations reached significance, a trend appears evident with stronger ability to performance relationships being demonstrated by those with high pride in work scores.

An explanation for this reversal across conditions may lie in the fact that it requires an optimal balance of pride and ability to produce maximal performance. If one assumes that pride may be either an intrinsic property of individuals or a quality generated by involvement in enlarged jobs, the reversal in ability to performance relationships may be easier to understand. The resulting explanation would argue that for abilities to be related meaningfully to performance, an optimal level of pride in

work must be present within those individuals employed. In the high job structural attribute condition, this optimal amount of pride in work may be approximately produced by the nature of the task itself, while in the low condition, the lack of job enlargement may require that individuals possess high intrinsic levels of this individual difference in order to compensate for the nature of the task involved. Clearly, further research will be needed to test this suggested explanation.

The physical task employed in collecting the current data was similar to that employed in earlier research by Barrett, O'Connor, Alexander, Forbes, and Balascoe (1975). Differences in the two studies lay principly in the addition of a task identity manipulation and the increased potency of all four job structural attribute manipulations. Despite the similarities in the data collection methods employed in the two studies, several strong relationships evident in the earlier work failed to reappear or were even reversals within the current data. Probably the most outstanding example of this lack of consistent findings is evident in Table 10 of the current report. While Barrett, O'Connor, Alexander, Forbes, and Balascoe (1975) found that field independent participants tended to work fastest in the low condition of their study, but slowest in that report's high condition, a partially reversed pattern is evident in the current data with no significant associations present in the new low condition and field independent individuals working fastest in the new manipulated high job structural attribute treatment. While such differences may represent a chance phenomenon or the result of a transition from a mixed sex to an all-male participant sample,

strong consideration should be given to the possibility that such changes are indicative of the substantial sensitivity of predictor to outcome relationships to the manipulation of task characteristics. Evidence appears to indicate that even when a physical task is held constant, altering the psychological characteristics of that work can have a substantive effect upon the associations among individual differences and both performance and satisfaction outcomes.

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